HITACHI

SERVICE MANUAL

PA **No. 0159**

32HDT20: PT2-E Chassis
42HDT20: PT2-G Chassis
AVC20: AVC1-U Chassis

NTSC

PT2E/G AVC1-U Chassis

R/C: CLU-5723TSI

TO GO TO A CHAPTER, CLICK ON IT'S HEADING BELOW

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CAUTION: These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Before servicing this chassis, it is important that the service technician read the “IMPORTANT SAFETY INSTRUCTIONS” in this service manual.

SAFETY NOTICE
USE ISOLATION TRANSFORMER WHEN SERVICING

Components having special safety characteristics are identified by a ⚠ on the schematics and on the parts list in this Service Data and its supplements and bulletins. Before servicing the chassis, it is important that the service technician read and follow the “Important Safety Instructions” in this Service Manual.

NOTE: This product is to be serviced at board level.

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

PLASMA DISPLAY PANEL

MAY 2002 **HHEA-MANUFACTURING DIVISION**

Version 0159.02

SAFETY PRECAUTIONS

NOTICE: Comply with all cautions and safety-related notes located on or inside the cover case and on the chassis or plasma module.

WARNING: Since the chassis of the AVC unit and Plasma Panel unit is connected to both sides of the AC power supply during operation, whenever the receiver is plugged in, service should not be attempted by anyone unfamiliar with the precautions necessary when working on this type of receiver.

1. When service is required, an isolation transformer should be inserted between power line and the receiver before any service is performed on a "HOT" chassis receiver.

2. When replacing a chassis in the receiver, all the protective devices must be put back in place, such as barriers, non-metallic knobs, insulating cover-shields, and isolation resistors, capacitors, etc.

3. When service is required, observe the original lead dress.

4. Always use manufacturer's replacement components. Critical components as indicated on the circuit diagram should not be replaced by another manufacturer's. Furthermore, where a short circuit has occurred, replace those components that indicate evidence of over heating.

5. Before returning a serviced receiver to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the receiver by the manufacturer has become defective, or inadvertently defeated during servicing.

Therefore, the following checks should be performed for the continued protection of the customer and service technician.

Leakage Current Cold Check

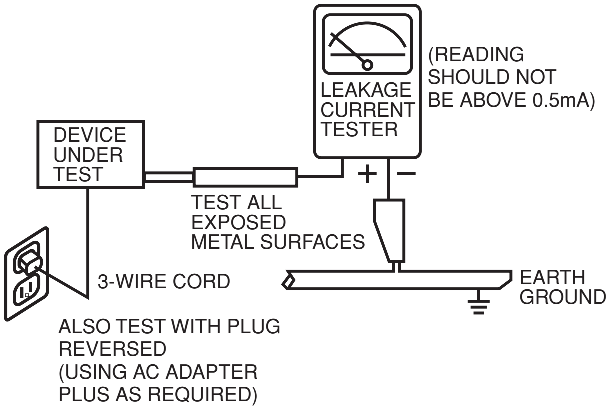
With the AC plug removed from the 120V AC 60Hz source, place a jumper across Line 1 and Line 2 of the three plug prongs, do not connect with the third prong, which is physical ground.

Using an insulation tester (DC500V), connect one of its leads to the AC plug jumper and touch with the other lead each exposed metal part (antennas, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis shoud have a minimum resistor reading of 4MΩ and a maximum resistor reading of 7.14MΩ. Any resistance value below or above this range indicates an abnormality which requires corrective action. An exposed metal part not having a return path to the chassis will indicate an open circuit.

Leakage Current Hot Check

This check must be done considering the AVC or the PDP monitor as one instrument each.

With any of the instruments completely reassembled (being the instrument either the AVC center or the PDP monitor), plug the AC line cord directly into a 120V AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with the American National Standards Institute (ANSI) C101.0 Leakage Current for Appliances. In the case of the PDP monitor set the AC switch first in the ON position and then in the OFF position, measure from a known earth ground (metal waterpipe, conduit, etc.) to all exposed metal parts of the instrument (antennas, handle bracket, metal cabinet, screw heads, metallic overlays, control shafts, etc.), especially any exposed metal parts that offer an electrical return path to the chassis. Any current measured must not exceed 0.5 milliamps. Reverse the instrument power cord plug in the outlet and repeat test.



LEAKAGE CURRENT TESTER
(READING SHOULD NOT BE ABOVE 0.5mA)
DEVICE UNDER TEST
+
−
TEST ALL EXPOSED METAL SURFACES
3-WIRE CORD
EARTH GROUND
ALSO TEST WITH PLUG REVERSED (USING AC ADAPTER PLUS AS REQUIRED)

AC LEAKAGE TEST

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE RECEIVER TO THE CUSTOMER.

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in HITACHI television receivers have special safety-related characteristics. These are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified with a ⚠1mark in the schematics and parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the HITACHI-recommended replacement component, shown in the parts list in this Service Manual, may create shock, fire, X-radiation, or other hazards.

Product safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current HITACHI Service Manual. A subscription to, or additional copies of HITACHI Service Manuals may be obtained at a nominal charge from HITACHI Sales Corporation.

AVC20 - Audio Video Control Unit

1. Follow the general caution recommendations from “Safety precautions” section.

32/42HDT20M - Plasma Monitor Unit

1. Follow the general caution recommendations from “Safety precautions” section.
2. Since the Panel module and front filter are made of glass, sufficient care shall be taken when handling the broken module and filter in order to avoid injury.
3. If necessary to replace Panel module, this work must be started after the panel module and the AC/DC Power supply becomes sufficiently cool.
4. Special care must be taken with the display area to avoid damaging its surface.
5. The Panel Module shall not be touched with bare hands to protect its surface from stains.
6. It is recommended to use clean soft gloves during the replacing work of the Panel module in order to protect, not only the display area of the panel module but also the serviceman.
7. The Chip Tube of the panel module (located upper left of the back of the panel module) and flexible cables connecting Panel glasses to the drive circuitry Printed Wiring Boards (P.W.B.) are very weak, so sufficient care must be taken to prevent breaking or cutting any of these. If the Chip Tube breaks the panel module will never work, replacement for a new plasma panel module will be needed.
8. Signal, power supply P.W.B.’s and PDP driving circuits P.W.B.’s are assembled on the rear side of the PDP module, take special care with this fragile circuitry; particularly, Flexible Printed Circuits bonded to surrounding edges of the glass panel. They are not strong enough to withstand harsh outer mechanical forces. Avoid touching the flexible printed circuits by not only your hands, but also tools, chassis, or any other object. Extreme bending of the connectors must be avoided too. In case the flexible printed circuits are damaged, the corresponding addressed portions of the screen will not be lit and exchange of a glass panel will be required.

PDP Module Handling

When there is need to replace a broken PDP module which is the displaying device from the Plasma monitor unit, consider the following:

1. When carrying the PDP module, two persons should stand at both shorter-edge sides of the glass-panel and transport it with their palms. Avoid touching the Flexible Printed Circuits or the chip tube on the corner of the glass-panel. Handle only by the surface of the glass panel. In case of some PDP modules, electrode repair is done by connecting between regular terminal with Cu tape and Cu wire. Please do not hook and/or damage this repair line. If it is damaged, the module will not function unless the glass-panel is exchanged with a new glass-panel.
2. When carrying PDP module, watch surrounding objects, such as tables, and also do not carry it alone sice it may be dangerous and it will be damaged due to excessive stress to the module (glass-panel).
3. Please do not stand the codule with the edge of the glass-panel on the table since this might result in damage to the glass-panel and/or flexible printed circuits due to excessive stress to the module (glass-panel).

WARNING
Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health and Safety Code, Section 25249.5).

When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with solder. Also, when soldering make sure you are in a well ventilated area in order to avoid inhalation of any smoke or fumes released.

SAFETY NOTICE
USE ISOLATION TRANSFORMER
WHEN SERVICING

POWER SOURCE

This television receiver is designed to operate on 120 Volts/60Hz, AC house current. Insert the power cord into a 120 Volts/60Hz outlet.

NEVER CONNECT THE TV TO OTHER THAN THE SPECIFIED VOLTAGE OR TO DIRECT CURRENT.

SERVICING PRECAUTIONS

CAUTION: Before servicing instruments covered by this service data and its supplements and addenda, read and follow the "Important Safety Instructions" on page 3 of this publication.
NOTE: If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions on page 3 of this publication, always follow the safety precautions. Remember: Safety First.

General Servicing Guidelines

1. Always unplug the instrument AC power cord from the AC power source before:
   a. Removing or reinstalling any component, circuit board, module, or any other instrument assembly.

   b. Disconnecting or reconnecting any instrument electrical plug or other electrical connection.

   c. Connecting a test substitute in parallel with an electrolytic capacitor in the instrument.

   CAUTION: A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.

2. Do not spray chemicals on or near this instrument or any of its assemblies.

3. Unless specified otherwise in these service data, clean electrical contacts by applying the following mixture to the contacts with a pipe cleaner, cotton-tipped stick or comparable nonabrasive applicator: 10% (by volume) Acetone and 90% (by volume) isopropyl alcohol (90%-99% strength).
   CAUTION: This is a flammable mixture. Unless specified otherwise in these service data, lubrication of contacts is not required.

4. Do not defeat any plug/socket of voltage interlocks with which instruments covered by this service data might be equipped.

5. Do not apply AC power to this instrument and/or any of its electrical assemblies unless all solid-state device heat-sinks are correctly installed.

6. Always connect the test instrument ground lead to the appropriate instrument chassis ground before connecting the test instrument positive lead. Always remove the test instrument ground lead last.

7. Use with this instrument only the test fixtures specified in this service data.
   CAUTION: Do not connect the test fixture ground strap to any heatsink in this instrument.

Electrostatically Sensitive (ES) Devices
Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.

2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.

3. Use only a grounded-tip soldering iron to solder or desolder ES devices.

4. Use only can anti-static type solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES device.

5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.

6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material.)

7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

General Soldering Guidelines

1. Use a grounded-tip, low-wattage soldering iron and appropriate tip size and shape that will maintain tip temperature within the range 500°F to 600°F.

2. Use an appropriate gauge of resin-core solder composed of 60 parts tin/40 parts lead.

3. Keep the soldering iron tip clean and well-tinned.

4. Thoroughly clean the surfaces to be soldered. Use a small wire-bristle (0.5 inch or 1.25 cm) brush with a metal handle. Do not use freon-propelled spray-on cleaners.

5. Use the following desoldering technique.
   a. Allow the soldering iron tip to reach normal temperature (500°F to 600°F).

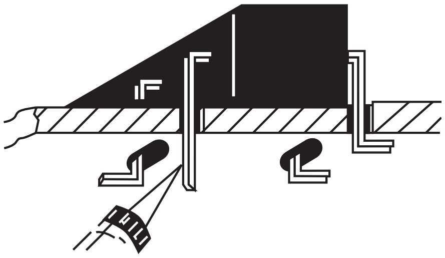
   b. Heat the component lead until the solder melts. Quickly draw away the melted solder with an anti-static, suction-type solder removal device or with solder braid.
   CAUTION: Work quickly to avoid overheating the circuit board printed foil.

6. Use the following soldering technique.
   a. Allow the soldering iron tip to reach normal temperature (500°F to 600°F).

   b. First, hold the soldering iron tip and solder strand against the component lead until the solder melts.

   c. Quickly move the soldering iron tip to the junction of the component lead and the printed circuit foil, and hold it there only until the solder flows onto and around both the component lead and the foil.
   CAUTION: Work quickly to avoid overheating the circuit board printed foil or components.

   d. Closely inspect the solder area and remove any excess or splashed solder with a small wire-bristle brush.



Use Soldering Iron to Pry Leads

IC Removal/Replacement

Some Hitachi unitized chassis circuit boards have slotted holes (oblong) through which the IC leads are inserted and then bent flat against the circuit foil. When holes are the slotted type, the following technique should be used to remove and replace the IC. When working with boards using the familiar round hole, use the standard technique as outlined in paragraphs 5 and 6 above.

Removal

1. Desolder and straighten each IC lead in one operation by gently prying up on the lead with the soldering iron tip as the solder melts.

2. Draw away the melted solder with an anti-static suction-type solder removal device (or with solder braid) before removing the IC.

Replacement

1. Carefully insert the replacement IC in the circuit board.

2. Carefully bend each IC lead against the circuit foil pad and solder it.

3. Clean the soldered areas with a small wire-bristle brush. (It is not necessary to reapply acrylic coating to areas.)

"Small-signal" Discrete Transistor Removal/Replacement

1. Remove the defective transistor by clipping its leads as close as possible to the component body.

2. Bend into a "U" shape the end of each of three leads remaining on the circuit board.

3. Bend into a "U" shape the replacement transistor leads.

4. Connect to replacement transistor leads to the corresponding leads extending from the circuit board and crimp the "U" with long nose pliers to insure metal to metal contact, then solder each connection.

Power Output Transistor Devices Removal/Replacements

1. Heat and remove all solder from around the transistor leads.

2. Remove the heatsink mounting screw (if so equipped).

3. Carefully remove the transistor from the circuit board.

4. Insert new transistor in circuit board.

5. Solder each transistor lead, and clip off excess lead.

6. Replace heatsink.

Diode Removal/Replacement

1. Remove defective diode by clipping its leads as close as possible to diode body.

2. Bend the two remaining leads perpendicularly to the circuit board.

3. Observing diode polarity, wrap each lead of the new diode around the corresponding lead on the circuit board.

4. Securely crimp each connection and solder it.

5. Inspect (on the circuit board copper side) the solder joints of the two "original leads". If they are not shiny, reheat them and, if necessary, apply additional solder.

Fuses and Conventional Resistor Removal/Replacement

1. Clip each fuse or resistor lead at top of circuit board hollow stake.

2. Securely crimp leads of replacement component around stake 1/8 inch from top.

3. Solder the connections.

   CAUTION: Maintain original spacing between the replaced component and adjacent components and the circuit board, to prevent excessive component temperatures.

Circuit Board Foil Repair

Excessive heat applied to the copper foil of any printed circuit board will weaken the adhesive that bonds the foil to the circuit board, causing the foil to separate from, or "lift-off," the board. The following guidelines and procedures should be followed whenever this condition is encountered.

In Critical Copper Pattern Areas

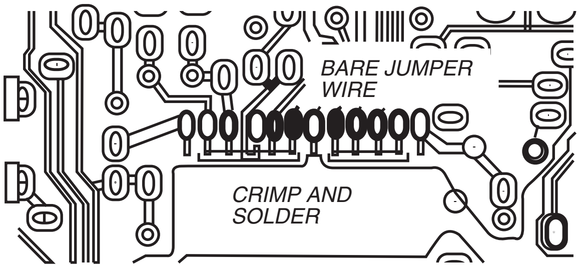
High component/copper pattern density and/or special voltage/current characteristics make the spacing and integrity of copper pattern in some circuit board areas more critical than in others. The circuit foil in these areas is designated as Critical Copper Pattern. Because Critical Copper Pattern requires special soldering techniques to ensure the maintenance of reliability and safety standards, contact your Hitachi personnel.

At IC Connections

To repair defective copper pattern at IC connections, use the following procedure to install a jumper wire on the copper pattern side of the circuit board. (Use this technique only on IC connections.)

1. Carefully remove the damaged copper pattern with a sharp knife. (Remove only as much copper as absolutely necessary.)

2. Carefully scratch away the solder resist and acrylic coating (if used) from the end of the remaining copper pattern.



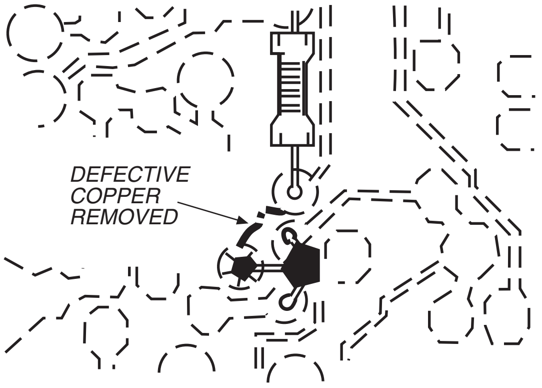
Install Jumper Wire and Solder

3. Bend a small "U" in one end of a small-gauge jumper wire and carefully crimp it around the IC pin. Solder the IC connection.

4. Route the jumper wire along the path of the cut-away copper pattern and let it overlap the previously scraped end of the good copper pattern. Solder the overlapped area, and clip off any excess jumper wire.

At Other Connections

Use the following technique to repair defective copper pattern at connections other than IC Pins. This technique involves the installation of a jumper wire on the component side of the circuit board.



Insulated Jumper Wire

1. Remove the defective copper pattern with a sharp knife. Remove at least 1/4 inch of copper, to ensure hazardous condition will not exist if the jumper wire opens.

2. Trace along the copper pattern from both wire sides of the pattern break and locate the nearest component directly connected to the affected copper pattern.

3. Connect insulated 20-gauge jumper wire from the nearest component on one side of the pattern break to the lead of the nearest component on the other side. Carefully crimp and solder the connections.

   CAUTION: Be sure the insulated jumper wire is dressed so that it does not touch components or sharp edges.

NOTE: ***These components are affixed with glue. Be careful not to break or damage any foil under the component or at the pins of the ICs when removing. Usually applying heat to the component for a short time while twisting with tweezers will break the component loose.***

Leadless Chip Components (surface mount)

Chip components must be replaced with identical chips due to critical foil track spacing. There are no holes in the board to mount standard transistors or diodes. Some chip capacitor or resistor board solder pads may have holes through the board, however the hole diameter limits standard resistor replacement to 1/8 watt. Standard capacitors may also be limited for the same reason. It is recommended that identical chip components be used. .

Chip resistors have a three digit numerical resistance code -1st and 2nd significant digits and a multiplier. Example: 162 = 1600 or 1.6KΩ resistor, 0 = 0Ω (jumper).

Chip capacitors generally do not have the value indicated on the capacitor. The color of the component indicates the general range of the capacitance.

Chip transistors are identified by a two letter code. The first letter indicates the type and the second letter, the grade of transistor.

Chip diodes have a two letter identification code as per the code chart and are a dual diode pack with either common anode or common cathode. Check the parts list for correct diode number.

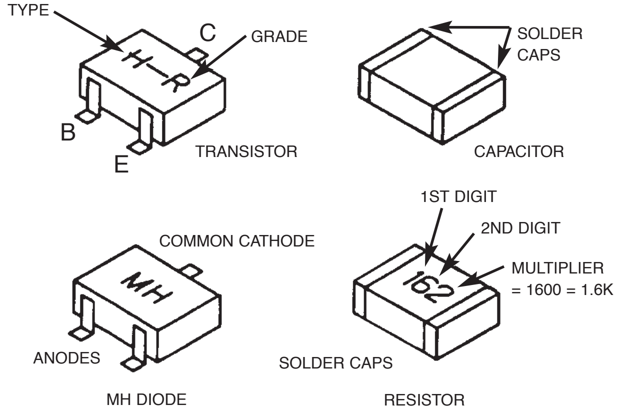
Component Removal

1. Use solder wick to remove solder from component end caps or terminals.
2. Without pulling up, carefully twist the component with tweezers to break the adhesive.
3. Do not reuse removed leadless or chip components since they are subject to stress fracture during removal .

Chip Component Installation

1. Put a small amount of solder on the board soldering pads.
2. Hold the chip component against the soldering pads with tweezers or with a miniature alligator clip and apply heat to the pad area with a 30 watt iron until solder flows. Do not apply heat for more than 3 seconds

Chip Components

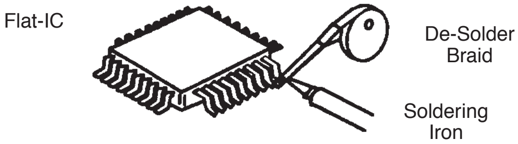

TYPE
C
GRADE
H–R
B
E
TRANSISTOR
SOLDER CAPS
CAPACITOR
1ST DIGIT
2ND DIGIT
MULTIPLIER
= 1600 = 1.6K
COMMON CATHODE
MH
ANODES
MH DIODE
162
SOLDER CAPS
RESISTOR

How to Replace Flat-IC

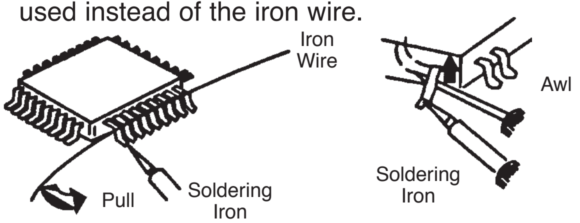
—Required Tools—

- Soldering iron
- De-solder braids
- iron wire or small awl
- Magnifier

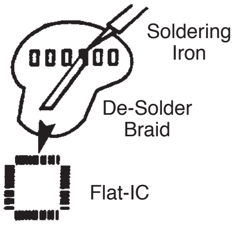
1. Remove the solder from all of the pins of a Flat-IC by using a de-solder braid.


Flat-IC
De-Solder
Braid
Soldering
Iron

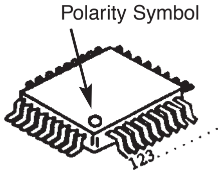
2. Put the iron wire under the pins of the Flat-IC and pull it in the direction indicated while heating the pins using a soldering iron. A small awl can be used instead of the iron wire.


Iron
Wire
Pull
Soldering
Iron
Awl
Soldering
Iron

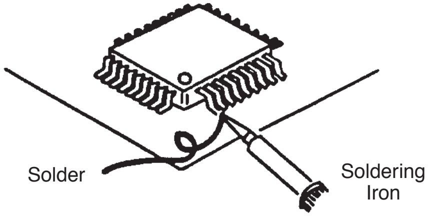
3. Remove the solder from all of the pads of the Fiat-IC by using a de-solder braid.


Soldering
Iron
De-Solder
Braid
Flat-IC

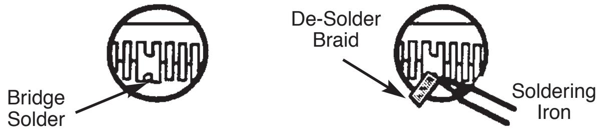
4. Position the new Flat-IC in place (apply the pins of the Flat-IC to the soldering pads where the pins need to be soldered). Properly determine the positions of the soldering pads and pins by correctly aligning the polarity symbol.


Polarity Symbol
123

5. Solder all pins to the soldering pads using a fine tipped soldering iron.


Solder
Soldering
Iron

6. Check with a magnifier for solder bridge between the pins or for dry joint between pins and soldering pads. To remove a solder bridge, use a de-solder braid as shown in the figure below.


Bridge
Solder
De-Solder
Braid
Soldering
Iron

AGENCY REGULATORY INFORMATION

Federal Communications Commission Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Hitachi Home Electronics (America), Inc. may void the user's warranty.

Cables

Connections to this device must be made with shielded cables with metallic RFI/EMI connector hoods to maintain compliance with FCC Rules and Regulations.

Any cables that are supplied with the system must be replaced with identical cables in order to assure compliance with FCC rules. Order Hitachi spares as replacement cables.

Declaration of Conformity

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

For questions regarding this declaration, contact:

Hitachi America, LTD.
Home Electronics Division
1855 Dornoch Court
San Diego, CA 92154
Tel. 1-800-448-2244 (1-800-HITACHI)
ATTN: CUSTOMER RELATIONS

ACKNOWLEDGMENTS AND TRADEMARKS

This Plasma Television complies with VESA DDC2B specifications, Plug & Play is a system with computer, peripherals (including monitors) and operating system. It works when the monitor is connected to a DDC ready computer that is running an operating system software that is capable for the plug & play.

When a Plug and Play PC is powered on, it sends a command to the Monitor requesting identification. The Monitor sends back a string of data including its characteristics.

TRADEMARK ACKNOWLEDGMENT

DDC™ is a trademark of Video Electronics Standard Association.
IBM PC/AT and VGA are registered trademarkds of International Business Machines Corporation of the U.S.A.
Apple and Macintosh are registered trademarks of Apple Computer, Inc.
VESA is a trademark of a nonprofit organization, Video Electronics Standard Association.

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Cable Compatible Television Apparatus- Tèlèvision câblocompatible, Canada.

Notes on Closed Caption:
This Plasma Television receiver will display television closed captioning, (CC or 🗨), in accordance with paragraph 15.119 of the FCC rules.

TruBass and the SRS (●)® symbol are trademarks of SRS Labs, Inc. TruBass technology is incorporated under license from SRS Labs, Inc.

INTRODUCTION

The 32/42HDT20 is a Plasma Television set; it is constituted by the combination of two main parts, an AUDIO VIDEO CONTROL Center, and the Plasma Display monitor.
Each part has a model name and a chassis name:

Part	Model Name	Chassis Name
Audio Video Control Center	AVC20	AVC1-U
32” Plasma Display Monitor	32HDT20M	PT2-E
42” Plasma Display Monitor	42HDT20M	PT2-G

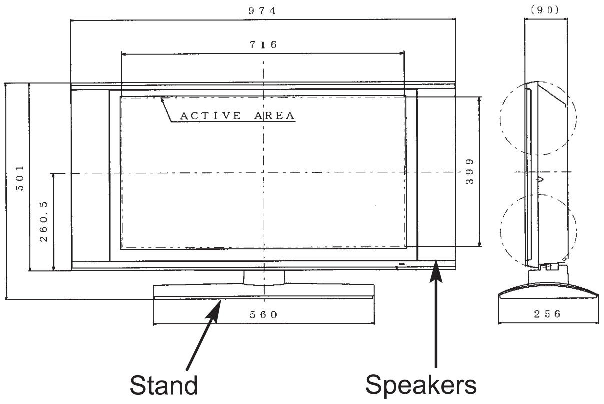
The AVC center is a box that controls most of the user functions of the complete TV set and conditions the signal before it arrives to the monitors.

The monitors, 32” and 42”, contain the displaying device, which is the plasma display panel module, and the driving circuitry, which receives the signal from the AVC center and after processing, delivers the image to the display module.

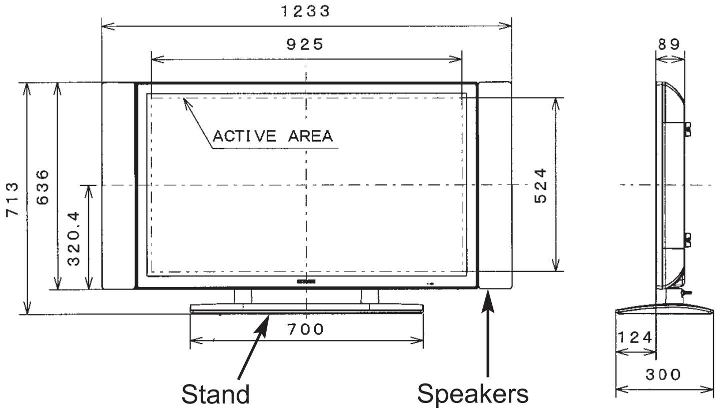
This HITACHI Service Manual is intended for the qualified service personnel and it contains the necessary information for troubleshooting the Plasma television set in case of malfunction.

DIMENSIONS:

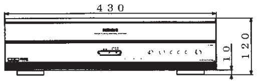
32HDT20M



42HDT20M



AVC20



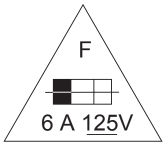
POWER RATINGS:

		Indicated Value				
		Max Rating		Average	P_{ST}(W)	
No.	Model Name	(W)	(A)	Rating (W)	(W)	Chassis
1	32HDT20M	230	2.2	152	0.9	PT2-E
2	42HDT20M	350	3.5	217	1.1	PT2-G
3	AVC20	35	.75	35	2.7	AVC1-U

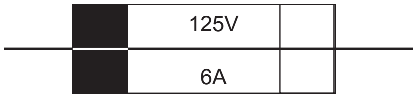
CIRCUIT PROTECTION

CAUTION: Below is an EXAMPLE only. See Replacement Parts List for details. The following symbol near the fuse indicates fast operation fuse (to be replaced). Fuse ratings appear within the symbol.

Example:



“RISK OF FIRE - REPLACE FUSE AS MARKED”



The rating of fuse F901 is 6A - 125V.
Replace with the same type fuse for continued protection against fire.

PDP MONITOR SPECIFICATIONS

Item	Model Name	32HDT20M	42HDT20M
Destination		U.S.A. / CANADA	←
Exterior	Cabinet Dimensions: (Main Body) (Speaker & stand included)	974x501x90mm 974x578x256mm	1030x636x89mm 1233x713x300mm
	Cabinet Color	Metallic Silver	←
	Stand	Included	←
	Weight (Main Body) (Speaker & Stand included) (Main Body:Packed)	23.1 kg typ. 26.2 kg typ. 33.0 kg typ. (Packed)	29.8 kg typ. 38.8 kg typ. 43 kg typ. (Packed)
	Screen Size	715.68x399.39mm (32”: 16x9)	922x522mm (42”: 16x9)
Display Panel	Resolution	852x1024 pixels	1024x1024 pixels
	Dot Pitch (H)	0.84mm	0.90mm
	Dot Pitch (V)	0.39mm	0.51mm
	Viewing Angle (H)	±80°	←
	Viewing Angle (V)	±80°	←
Front Filter	Surface Finishing	AR Coating, Mesh	←
Brightness	Peak Brightness (4% window)	Over 200 cd/m^2 (When VIDEO, Sports, Color temperature ‘HIGH’ Input Signal Amplitude 120% is set) Over 190 cd/m^2 (When RGB is set)	Over 190 cd/m^2 (When VIDEO, Sports, Color termperature ‘HIGH’ Input Signal Amplitude 120% is set) (Over 210 cd/m^2 (When RGB is set)
	All White Pattern	Over 45 cd/m^2	Over 45 cd/m^2
Contrast	Contrast ratio	500:1 (typ.)	700:1 (typ.)
Color Reproduction	Color Reproduction	Over 16.7 million colors	←
Audio Output	Audio Output	7w + 7w (6Ω)	9w + 9w (6Ω)
Panel Operation	Main Power Switch	PUSH (LOCK) 1 Switch	←
	Sub Power Switch	PUSH (NON-LOCK) 1 Switch	←
Input Terminal	Video/Audio Input	24 pin DVI connector 1 system 8 pin Mini DIN connector 1	←
Output Terminal	Audio Line Output	Sub Woofer Output 1 system	←
	Speaker Output	One system each for L and R	←
Power Supply Source	Connector	3 Polarity Receptacle	←
	Input Voltage	Single Phase AC108~132V,60Hz	←
Guaranteed Environment Condition	Temp. (Operating)	5°C~35°C (41°F~95°F)	←
	Temperature (Stored)	-15°C~60°C(5°F~140°F)	←
	Humidity (Operating)	20~80%RH (Non-condensing)	←
	Humidity (Stored)	20~90%RH (Non-condensing)	←
	Atmospheric Pressure (Operating)	800 to 1114hPa (altitude: 1888m to -757m, 6194’ to -2484’)	←
	Atmospheric Pressure (Stored)	300 to 1114hPa (altitude: 9727m to -757m, 15,510’ to -2484’)	←

AVC SPECIFICATIONS (1 of 2)

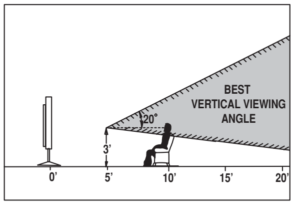
MODEL				AVC20	
Dimensions	Size		1	430mm x 121mm x 280mm	
	Weight		2	4.0kg	
A/C Input Voltage	Input AC voltage		3	AC108V~132V (With 3 plug AC Power Cord inlet type, 1.8m legth)	
	Input AC Frequency		4	60Hz	
	Power Consumption		5	35W, Standby 2.7W	
Front End	Front End		6	ENGE6106D/ENG36614G	
	Available Channel		7	2~13	VHF
			8	14~69	UHF
			9	A-5~A-1,A~W,W+1~W+84	CATV
Input Signal	Video Signal		10	NTSC	
	Component Signal		11	480i/p, 1080i, 720p	
	PC Signal		12	VGA~SXGA (fH:24KHz-80KHz, fV:50Hz-75Hz)	
Picture	Y/C Separation		13	3D Y/C (ON fix)	
	Line Correction		14	No	
	I-P Conversion		15	Motion Adaptive Interpolation	
	Picture Mode		16	News, Movie, Music, Sports	
	Display Mode		17	1024i	Video Signal
			18	1024i	Component Signal
			19	1024i	PinP Mode
			20	1024i	PC Signal
Sound Enhancement			21	TruBass (High, Medium, Low, Off) Matrix Surround (On, Off)	
Adjustment	Settings for Video Signal		22	Picture, Contrast, Brightness, Color Tint, Sharpness, W/B Temp.	
	Settings for PC Signal		23	Contrast, Brightness, W/B Temp., Enhancer	
	Settings for PC Raster		24	Hor./Vert./Raster Position, Dot Clock Frequency/Phase	
	Settings for Sound		25	Vol., Balance, Bass, Treble, Mute	
General Function	Split PinP		26	For all video signal combinations, except PC Signal	
	Surf PinP		27	With (Component Input is used only for Main Picture)	
	Wide Mode		28	5 Modes (Only NTSC, 480i, 480p)	
	Aspect Selection	Video	29	4:3 Standard/16:9 Standard/ 4:3 Expanded/Zoom1/Zoom2	
		PC	30	Full/Normal/Real (Real only in VGA mode)	
	Film Theater		31	With (only Movie Mode)	
	Color Temperature		32	3 Modes (High, Medium, Standard)	
	Input Signal Selection		33	RGB1, RGB2, VIDEO1/2/3/4/5, ANT A/B	

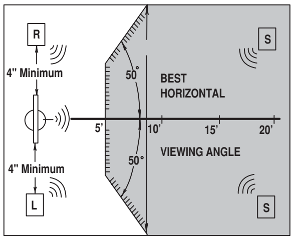
AVC SPECIFICATIONS (2 of 2)

MODEL			AVC20	
General Function	Gamma Correction	34	Only for Service Menu	
	Picture Enhancer	35	With (only RGB1/2)	
	Input Signal Identification	36	Yes	
	Audio Special Mode	37	No	
	Power Save Mode	38	With	PC In
		39	With (On/Off)	Video In
	Burning Protection	40	With (Raster Shift on all/White Pattern)	
	OSD Language VIDEO/PC	41	English, French, Spanish/English	
R/C Handset		42	CLU-5723TSI	ALPS
In/Out Terminal	PC Input (RGB)	43	2 Inputs mini Dsub-15PX1, DVI-DX1	
	Composite Video Input (Video2~5)	44	4 Input RCA pin x4 (1 Input Front Panel)	
	S-In (S2 Terminal)(Video/5 are common selected, S-In is priority)	45	3 Input; mini Din-4Px3 (1 S-In on Front Panel)	
	Component Signal Input (Video1, Video2)	46	2 Input; RCA pin x 6 (Y of Video 2 is common input for Composite in)	
	Audio In (L/R) (Lch:mono)	47	7 Input; RCA pin x 14 RGB: 2 Input, Video 5 Input	
	CATV In	48	1 Input (VIDEO2 Link)	
	U/V Ant Input	49	Ant A In, Ant B In, To Conv.	
	Video Monitor Out Terminal	50	1 Output: RCA pin x1	
	Audio Output Terminal	51	1 Output L/R; RCA pin x 2	
	Audio Monitor Out Terminal	52	1 Output L/R; RCA pin x 2	
	IR-OUTPUT	53	2 Terminal	
	Headphone Terminal	54	1 Terminal (only for AVC)	
	PDP Interface Terminal	55	DVI-D(26p) + 8PIN-DIN	
Front Key	Main Power Switch	56	No	
	Power On/Off Switch	57	With (link to PDP)	
	IR Receving Unit	58	With (link to PDP)	
	Power Indicator LED	59	With	
	Menu Control Key	60	With (Ch U/D, Vol U/D, A/V Input Select, Menu Select)	

BASIC SETUP & OPERATION

VIEWING





The major benefit of the HITACHI Plasma Television is its large viewing screen. To see this large screen at its best, test various locations in the room to find the optimum spot for viewing. The best picture is seen by sitting directly in front of the TV and about 8 to 18 feet from the screen.

During daylight hours, reflections from outside light may appear on the screen. If so, drapes or screens can be used to reduce the reflection or the TV can be located in a different section of the room.

If the TV's audio output will be connected to a Hi-Fi system's external speakers, the best audio performance will be obtained by placing the speakers equidistant from each side of the receiver cabinet and as close as possible to the height of the picture screen center. For best stereo separation, place the external speakers at least four feet from the side of the TV, place the surround speakers to the side or behind the viewing area. Differences in room sizes and acoustical environments will require some experimentation with speaker placement for best performance.

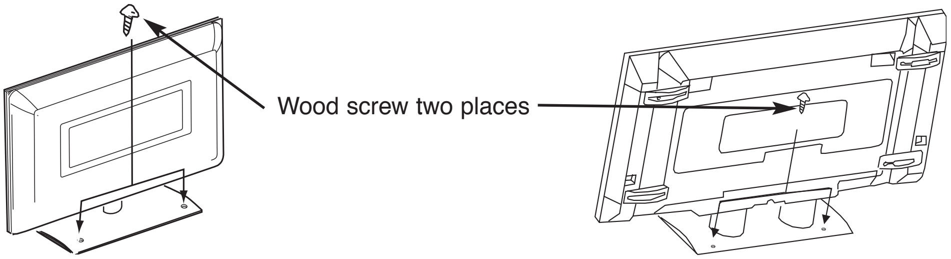
IMPORTANT NOTES

No.	Items	Notes
1	Arching sound from plasma display monitor's panel.	A buzzing sound might be heard when the plasma display monitor is turned on in a very quiet room. This is due to the plasma panel drive circuit when it is functioning. This arching sound is normal and it is not a malfunction.
2	Interference for infrared equipment.	Some infrared rays are emitted from the plasma display monitor's panel that might affect other infrared controlling equipment.
3	Bright and dark spots	High-precision technology is used to manufacture the plasma display panel; But in some cases, there are minor defects in some parts of the screen. Points that do not light, points with brightness different from that of the periphery, points with color different from that of the periphery, etc. Some pixels will always be on or always off. Please note that this is not a malfunction.
4	Picture Image (Spectrum)	When receving still picture signals, (e.g. channel number indication or clock indication) for a while, you can see image-like when the picture varied. This is not a defect.
5	Display panel surface temperature is too high	The plasma display panel is lighting the phosphors by the discharge of internal radiation. In some cases, this may cause the temperature of the panel surface to increase. Please note that this is not a malfunction. The Plasma TV surface temperature is higher than a Cathode-ray-tube.
6	Plasma Surface	The plasma panel is made from glass. Heavy shock on the front panel might damage it.
7	Transportation	When the PDP monitor is transported horizontally, the glass panel has the possibility of being broken or increasing the picture defects. At the time of transportation, horizontal style is prohibited. More-over, please treat the plasma panel with great care because of a precision apparatus. Please instruct transporters so that it should be put into the packing box at the time of shipment.(There is a possibility that breakage of the panel or defects will increase.) Rough transportation might cause damage to the panel and pixel failure.
8	Image retention	The plasma monitor illuminates phosphor to display images. The phosphor has a finite illumination life. After extended periods of illumination, the brightness of the phosphor will be degraded to such extent that stationary images would burn-in that part of the screen as grayed-out images. Tips to prevent such image retention are: - Do not display images having sharp brightness differences or hi-contrast images, such as monochrome characters and graphic patterns, for long. - Do not leave stationary images appearing for long, but try to refresh them at appropriate intervals of time, or try to move them using screen saver function. - Turn down the contrast and brightness controls.
9	Luminosity and contrast	PDP television has luminosity and low contrast compared with CRT television.
10	Granular spots	When a screen is seen at point-blank range, a random fine grain may be visible to a dark part.
11	Disturnbance to video apparatus	If an apparatus (VCR, etc.) antenna line is arranged near the monitor, the image may shake, or disturbance may be received.
12	Lip Sync	There is some time lag betweeen the picture and the sound. You can see lip motion that is delayed compared to the sound.
13	About the use environment of PDP television (temperature)	Electric discharge/luminescence characteristic of the PDP panel also changes with peripheral temperature. Moreover, since there is also high power consumption value, a specified temperature environment is required.
14	Caution on prolonged storage	Storing the plasma television for a period of more than 2 to 3 months without use might cause an unstable picture when the set is turned on.
15	Operating	Operating altitude: 800 to 1114hPa (6194ft to -2484ft). Operating temperature: 41˚F to 95˚F.
16	Storage	Storage Altitude: 300 to 1114hPa (15510ft to -2484ft). Storage temperature: 5˚F to 140˚F.

To take measures to prevent the Plasma Display from tipping over and prevent possible injury it is important to mount the unit in a stable place.

Securing to a table-top

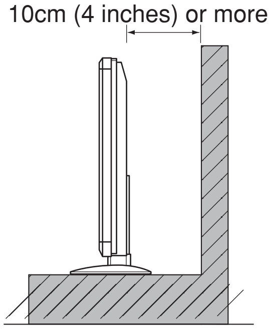
1. Using wood screws (two) fasten the set to the clamping screw holes on the rear of the Plasma Display stand as shown below.
2. Using commercially available wood screws, secure the set firmly in position.



32HDT20 Rear View 42HDT20

Securing to a wall

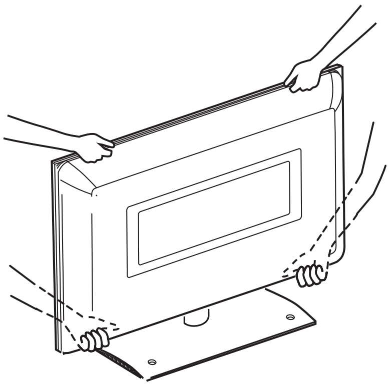
1. Keep the Plasma Display monitor four inches away from the wall except those hung to the wall mount bracket.



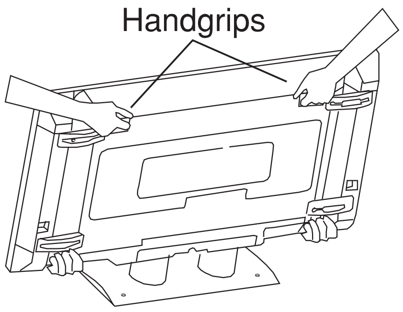
NOTES:
1. Do not block the ventilation holes of the Plasma Display monitor or the AVC center. Blocking the ventillation holes might cause fire or defect.
2. The plasma television has two AC cords, one on the AVC center and the other on the Plasma Display monitor. In case of an abnormal symptom, unplug both AC cords.
3. If you purchased the wall mount bracket option, please ask for professional installer. Do not install by yourself.

Caution when moving the main unit

As this product is heavy, whenever it is moved, two people are required to transport it safely. Whenever the unit is moved it should be lifted forward using the two handgrips at the back, and the unit should then be held at the base on both sides for stability. When moving the Display Monitor, lift the handles and the bottom frame as shown below. Do not grab the speakers or the back cover when lifting.



32HDT20



42HDT20

ANTENNA

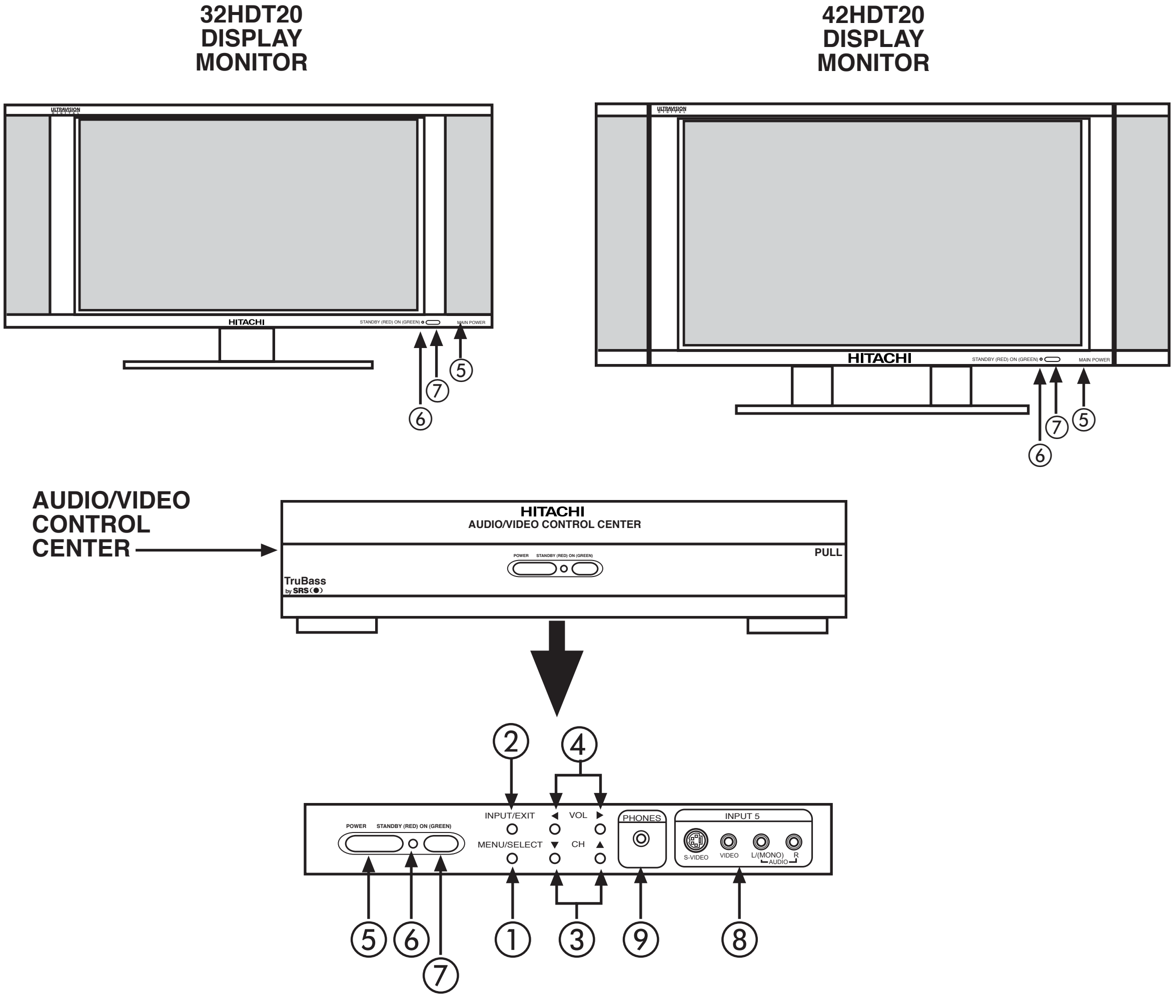
Unless your Plasma Television is connected to a cable TV system or to a centralized antenna system, a good outdoor color TV antenna is recommended for best performance. However, if you are located in an exceptionally good signal area that is free from interference and multiple image ghosts, an indoor antenna may be sufficient.

LOCATION

Select an area where sunlight or bright indoor illumination will not fall directly on the picture screen. Also, be sure that the location selected allows a free flow of air to and from the perforated back cover of the set.
To avoid cabinet warping, cabinet color changes, and increased chance of set failure, do not place the TV where temperatures can become excessively hot, for example, in direct sunlight or near a heating appliance, etc.

FRONT PANEL CONTROLS

FRONT VIEW


32HDT20
DISPLAY
MONITOR
42HDT20
DISPLAY
MONITOR
HITACHI
STANDBY (RED) ON (GREEN)
MAIN POWER
⑤
⑦
⑥
AUDIO/VIDEO
CONTROL
CENTER
HITACHI
AUDIO/VIDEO CONTROL CENTER
POWER
STANDBY (RED) ON (GREEN)
PULL
TruBass
by SRS
②
④
INPUT/EXIT
VOL
MENU/SELECT
CH
PHONES
INPUT 5
S-VIDEO
VIDEO
L/(MONO)
R
AUDIO
⑤
⑥
⑦
①
③
⑨
⑧

① **MENU/SELECT button**

This button allows you to enter the MENU, making it possible to set TV features to your preference without using the remote. This button also serves as the SELECT button when in MENU mode or Adjust Mode.

② **INPUT/EXIT button**

Press this button to select the desired input, VIDEO 1 to 5, RGB 1/2, or Ant A/B source. Your selection is shown in the top right corner of the screen. This button also serves as the EXIT button when in MENU mode or Adjust Mode.

NOTES: Your remote control does not have an INPUT button. To change to video inputs, press VID1~VID5 buttons depending on the input you wish to switch to. Press TV/RGB button on the remote control to change between the TV's RGB1, and RGB2 modes.

③ **CHANNEL selector**

Press these buttons until the desired channel appears in the top right corner of the TV screen. These buttons also serve as the cursor down (▼) and up (▲) buttons when in MENU mode or Adjust Mode.

④ **VOLUME level**

Press these buttons to adjust the sound level. The volume level will be displayed on the TV screen. These buttons also serve as the cursor left (◀) and right (▶) buttons when in MENU mode or Adjust Mode.

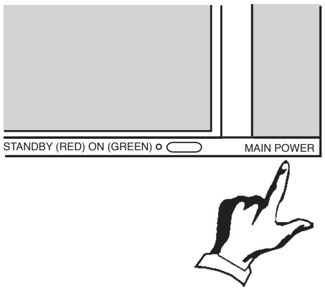
⑤ **POWER button**

Display Monitor “MAIN POWER” button

This power button is for the complete system, and must be turned ON/OFF manually. It is recommended to leave the “MAIN POWER” to ON condition (lights red) for stand-by mode.

AVC POWER button

The AVC power can be turned ON/OFF manually or by remote control. Turning on the AVC Power will only turn on the AVC box if the “MAIN POWER” of the display monitor is off.



⑥ **POWER light indicator**

To turn the monitor ON, press the main power switch located on the lower right side of the monitor. A red stand-by indicator lamp located on the lower right corner of the front bezel will illuminate. The PDP is now ready for remote on/off operation.

Indicating Lamp	Power Status	Operating
Off	Off	When the main power switch is set OFF.
Lights Red	Off (Stand-by)	When the main power switch on the display monitor is ON, and the AVC Center is OFF.
Lights Green	On	Display monitor MAIN POWER is ON and AVC Center power is ON.
Lights Orange (Flashing)	Off (Power Saving)	Display monitor MAIN POWER is ON and and AVC Center power is ON, with no signal input except antenna (no sync. signal).

NOTE: This Power light indicator is also a service aid. (See page 19.)

⑦ **REMOTE CONTROL sensor**

Point the remote at this area when selecting channels, adjusting volume, etc.

⑧ **FRONT INPUT JACKS (for VIDEO: 5)**

Use these audio/video jacks for a quick hook-up from a camcorder or VCR to instantly view a show or recording. press the VID5 button on the remote control button and VIDEO: 5 appears in the top right corner of the TV screen. If you have mono sound, insert the audio cable into the left audio jack.

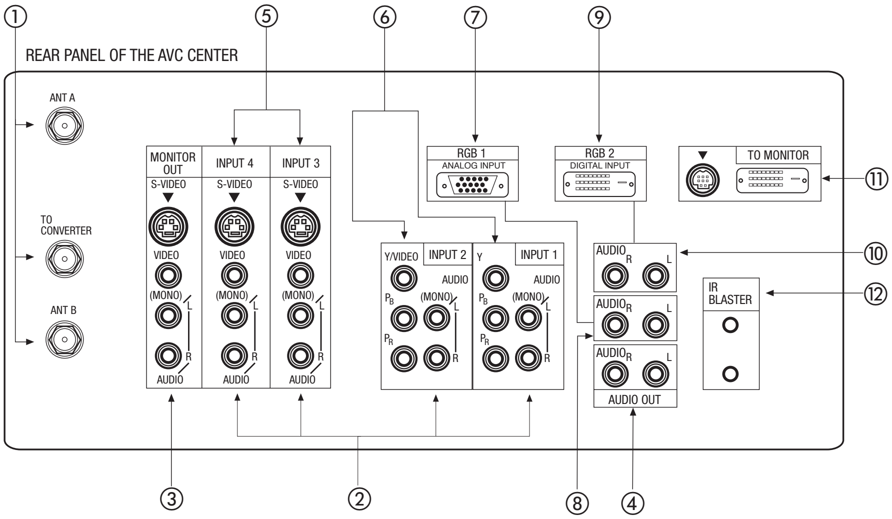
⑨ **PHONES JACK**

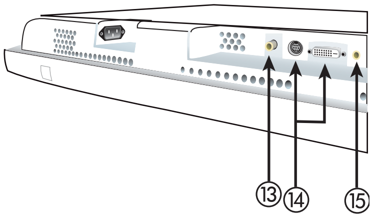
Use this jack for head-phones. The TV’s internal speakers can also be heard. Turn off the internal speakers by Audio, Advanced Settings, Options, if you wish to listen to the head-phones only.

NOTES: **1.** The HITACHI Plasma TV will appear to be turned OFF (lights orange) if there is no video input when VIDEO: 1, 2, 3, 4, 5, RGB1 or RGB2 is selected. Check the Power Light to make sure the Display Monitor is turned off or in Stand-by mode (lights red) when not in use.

2. Remote Control can not turn ON/OFF the “MAIN POWER” of the display monitor.

REAR PANEL JACKS





① **Antenna Input/Output**
The remote control allows you to switch between two separate 75-Ohm RF antenna inputs, ANT A and ANT B. ANT A input can be displayed as a main picture or sub-picture. ANT B can only be displayed as a main picture. (ANT B cannot be displayed as a sub-picture.) The antenna output labeled “TO CONVERTER” allows the ANT A connection to pass directly to a different source such as a cable box, only when ANT B is displayed as a main picture.

② **Audio/Video Inputs 1, 2, 3 and 4**
The VID1~VID4 buttons will select each video source each time they are pressed. Use the audio and video inputs to connect external devices, such as VCRs, camcorders, laserdisc players, DVD players etc. (If you have mono sound, insert the audio cable into the left audio jack.)

③ **MONITOR OUT**
These jacks provide fixed audio and video signals (ANT A/B, INPUT 2~5) which are used for recording. Use the S-VIDEO Output for high quality video output. Component signal to Input 1 and 2 will not have monitor output.

④ **AUDIO OUT**
These jacks provide fixed audio output for all audio sources (ANT A/B, INPUT1~5, and RGB 1/2) to a separate stereo amplifier.

⑤ **S-VIDEO Inputs 3 and 4**
Inputs 3 and 4 provide S-VIDEO (Super Video) jacks for connecting equipment with S-VIDEO output capability.

NOTES:

1. You may use VIDEO or S-VIDEO inputs to connect to INPUT 3 and 4, but only one of these inputs may be used at a time.
2. S-VIDEO output may be used for recording, only when the input is of S-VIDEO type.

⑥ **Component: $Y\text{-}P_BP_R$ Inputs**
Inputs 1 and 2 provide $Y\text{-}P_BP_R$ jacks for connecting equipment with this capability, such as a DVD player or Set Top Box. You may use standard video signal for INPUT 2. INPUT 1 does not accept composite video signal.

NOTES:

1. DO NOT connect composite VIDEO and S-VIDEO to Input 3, 4 or 5 at the same time. S-Video has a higher priority over video input.
2. Your component outputs may be labeled Y, B-Y, and R-Y. In this case, connect the components B-Y output to the AVC Box’s P_B input and the components R-Y output to the AVC Box’s P_R input.
3. Your component outputs may be labeled $Y\text{-}C_BC_R$. In this case, connect the component C_B output to the AVC Box’s P_B input and the component C_R output to the AVC Box’s P_R input.
4. It may be necessary to adjust TINT to obtain optimum picture quality when using the $Y\text{-}P_BP_R$ inputs.
5. To ensure no copyright infringement, the MONITOR OUT output will be abnormal, when using the $Y\text{-}P_BP_R$ jacks.

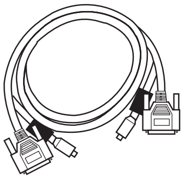
⑦ **RGB1 - Analog Input**
Use this 15-pin D-Sub input for your external devices with RGB output.

⑧ **RGB1 - Audio Input**
Connect audio for RGB1 input.

⑨ **RGB2 - Digital Input**
Use this RGB2 Digital input for your external devices with digital output capability.

⑩ **RGB2- Audio Input**
Connect audio for RGB2 input.

⑪ **To Monitor**
Connect the Monitor Connection Cable to the AVC center's "TO MONITOR" connector, and to the display monitors "FROM AVC" connector.



⑫ **IR Blaster**
This jack provides IR output to your external components (VCR, Cable box, DVD player, etc.). With this connection, your external components can automatically be controlled by the A/V network feature. This connection will allow you to control the external components with your Plasma Television's remote control in TV mode.

⑬ **Subwoofer Out**
Connect the external audio component input to this SUB WOOFER OUT output.

⑭ **To AVC**
Connect the Monitor Connection cable from the AVC center's "TO MONITOR" to these connectors ("FROM AVC").

⑮ **SUB-POWER button**
This power is for serviceman usage. It activates "Burn-in" mode for the Plasma Monitor.

To enter to Burn-in mode, follow the next conditions and steps:

Conditions:
1) Make sure Power Cord of AC line is connected to the PDP monitor.
2) The Main Power switch must be turned on.
3) The Monitor (DVI and DIN) connection cable must be unplugged from the Monitor.

Procedure:
1) Press Sub-Power button for at least 7 seconds until a click is heard from the relays inside the monitor. The PDP screen will start a sequence of different color rasters.

PDP MONITOR

Self Diagnostic

This button is also a troubleshooting aid, when a PDP monitor failure occurs, the pressing of the sub-power button, for more than 5 seconds, generates a blinking series of the power indicator light.

The next table shows the PDP printed wired board (PWB) in which failure most probably would be allocated according to the number of blinks.

Number of blinks of power indication light	Presumed failing PWB
1	Logic
2	Xsus
3	Ysus, SDM
4	Xsus, Ysus, SDM, POWER
5	Abus, ADM, POWER
6	ADM
7	ADM
8	ALL (All PWB's)

* SDM: Scan Driver Module
* ADM: Address Driver Module

CONNECTING A/V NETWORK

The Hitachi Plasma Television is equiped with an A/V Network feature. This feature helps to control external Audio/Video equipment (VCR, Set Top Box, DVD, etc.). Once this is setup, it allows the IR Mouse connector to control equipment using the Hitachi Plasma TV Remote Control. You can use the Hitachi remote control to control the Audio/Video equipment command without the equipment's remote control.

The Plasma Television AVC Center has 2 IR BLASTER jacks. Each IR Mouse cable can connect up to 2 external Audio/Video components. Therefore, you can connect the Plasma Television with up to four components. Please see the following example of an A/V Network setup between the Hitachi Plasma Television and external Audio/Video equipment (VCR and DVD Player).

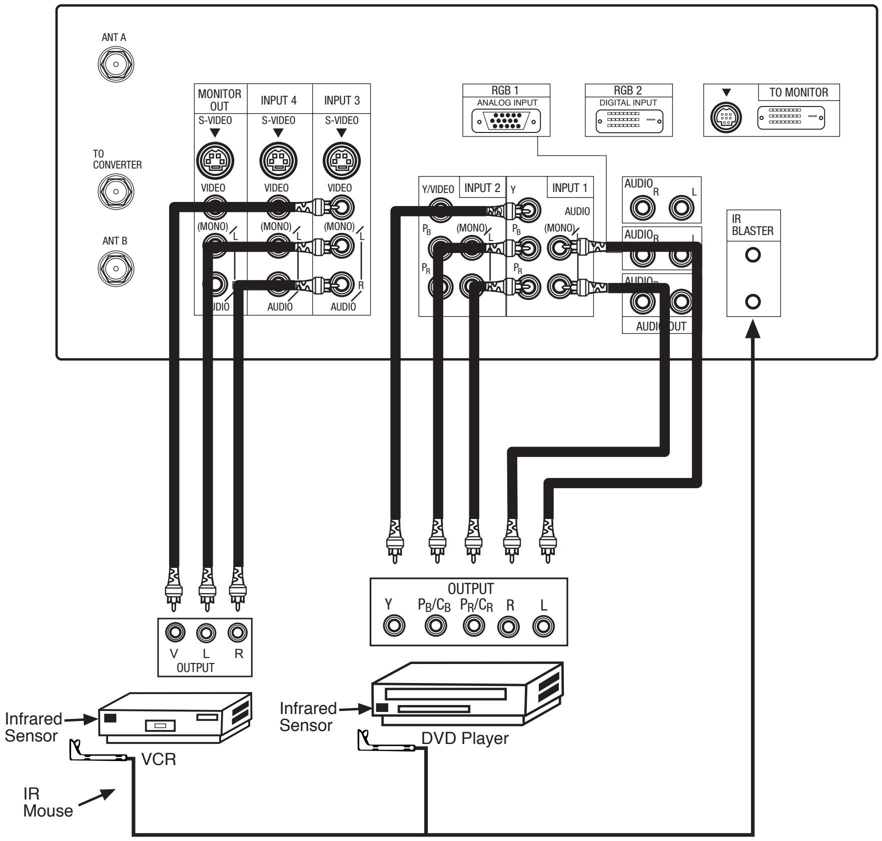
CONNECTING EXTERNAL AUDIO/VIDEO COMPONENTS TO IR BLASTER FOR A/V NETWORK

1. Connect external Audio/Video components to the AVC Center as shown in the example below.

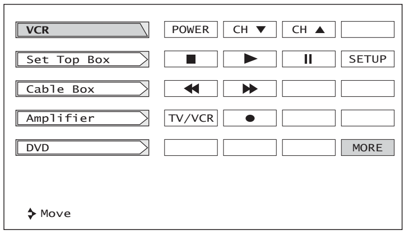
2. Connect the IR Mouse cable to the IR BLASTER output of the AVC Center.

3. Place the IR mouse in front of the infrared sensor of the external components you wish to control.

Rear Panel of the AVC Center


ANT A
TO CONVERTER
ANT B
MONITOR OUT
INPUT 4
INPUT 3
S-VIDEO
VIDEO
(MONO)
L
R
AUDIO
RGB 1
ANALOG INPUT
RGB 2
DIGITAL INPUT
TO MONITOR
Y/VIDEO
INPUT 2
Y
INPUT 1
PB
PR
AUDIO
AUDIO OUT
IR BLASTER
OUTPUT
Y
PB/CB
PR/CR
R
L
V
L
R
OUTPUT
Infrared Sensor
VCR
Infrared Sensor
DVD Player
IR Mouse

4. Press the A/V NET button on the remote control. Use THUMB STICK ▲ or ▼ to highlight the component you wish to set up. Use THUMB STICK ▶ to enter component's "SOFT KEY" control button. The A/V Network Setup Wizard will automatically start upon the very first use. You can access the Setup Menu Wizard again in the future by pressing the A/V net button and selecting SETUP.

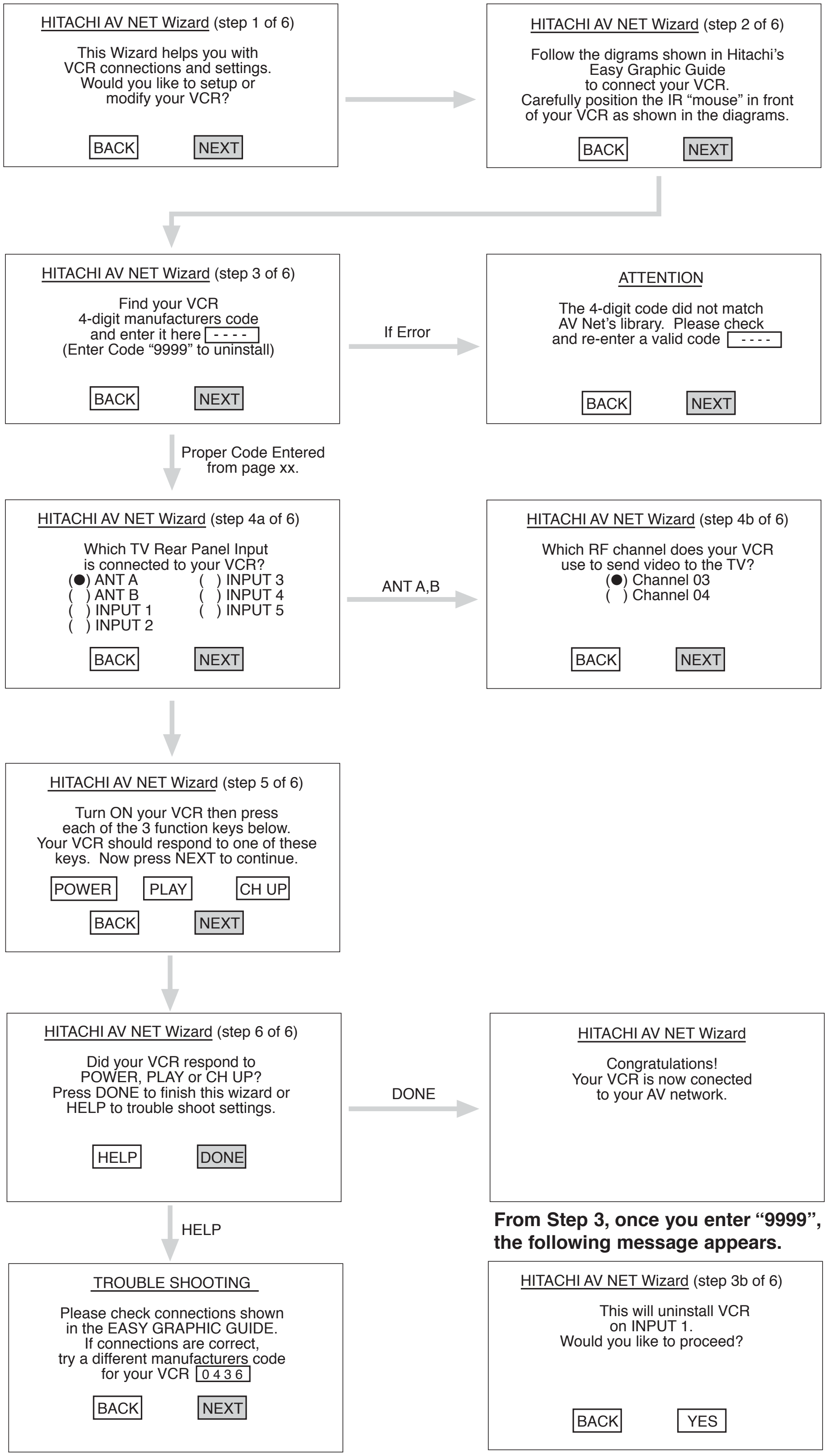

VCR
Set Top Box
Cable Box
Amplifier
DVD
POWER
CH ▼
CH ▲
■
▶
II
SETUP
◀◀
▶▶
TV/VCR
●
MORE
Move

NOTES:
1. The AVC Center has two IR BLASTER outputs which can control up to a total of four external components.
2. The IR Mouse must be placed in front of the external components infrared sensor for the A/V Network to work.
3. The correct codes must be entered for each of the Audio/Video components for the A/V Network to function properly.
4. Audio/Video component codes for A/V network are on page 22.

A/V NETWORK SETUP WIZARD

5. Follow the steps below to setup the A/V network (See page 22 for A/V Network Codes).

There are six steps in the setup procedure (VCR setup example below).



HITACHI AV NET Wizard (step 1 of 6)

This Wizard helps you with
VCR connections and settings.
Would you like to setup or
modify your VCR?

HITACHI AV NET Wizard (step 2 of 6)

Follow the digrams shown in Hitachi's
Easy Graphic Guide
to connect your VCR.
Carefully position the IR "mouse" in front
of your VCR as shown in the diagrams.

HITACHI AV NET Wizard (step 3 of 6)

Find your VCR
4-digit manufacturers code
and enter it here - - - -
(Enter Code "9999" to uninstall)

ATTENTION

The 4-digit code did not match
AV Net's library. Please check
and re-enter a valid code - - - -

HITACHI AV NET Wizard (step 4a of 6)

Which TV Rear Panel Input
is connected to your VCR?

- (●) ANT A
- ( ) ANT B
- ( ) INPUT 1
- ( ) INPUT 2
- ( ) INPUT 3
- ( ) INPUT 4
- ( ) INPUT 5

HITACHI AV NET Wizard (step 4b of 6)

Which RF channel does your VCR
use to send video to the TV?

- (●) Channel 03
- ( ) Channel 04

HITACHI AV NET Wizard (step 5 of 6)

Turn ON your VCR then press
each of the 3 function keys below.
Your VCR should respond to one of these
keys. Now press NEXT to continue.

HITACHI AV NET Wizard (step 6 of 6)

Did your VCR respond to
POWER, PLAY or CH UP?
Press DONE to finish this wizard or
HELP to trouble shoot settings.

HITACHI AV NET Wizard

Congratulations!
Your VCR is now conected
to your AV network.

TROUBLE SHOOTING

Please check connections shown
in the EASY GRAPHIC GUIDE.
If connections are correct,
try a different manufacturers code
for your VCR 0 4 3 6

From Step 3, once you enter "9999", the following message appears.

HITACHI AV NET Wizard (step 3b of 6)

This will uninstall VCR
on INPUT 1.
Would you like to proceed?

6. Enter code "9999" to uninstall the equipment from your A/V Network.

AUDIO/VIDEO CODES FOR A/V NETWORK

VCR BRAND	CODE
Admiral	0048, 0209
Adventura	0000
Aiko	0278
Aiwa	0307, 0000, 0037
Akai	0106, 0053, 0041, 0061
America Action	0278
American High	0035
Asha	0240
Audiovox	0037
Beaumark	0240
Bell & Howell	0104
Broksonic	0121, 0184, 0002, 0209, 0211, 0295, 0361, 0479
CCE	0072, 0278
Calix	0037
Canon	0035
Capehart	0020
Carver	0081
Cineral	0278
Citizen	0278, 0037
Colt	0072
Craig	0037, 0072, 0047, 0240, 0271
Curtis Mathes	0035, 0041, 0060, 0162, 0760
Cybernex	0051, 0240
Daewoo	0278, 0561, 0020, 0045
Daytron	0020
Denon	0042
Dynatech	0000
Electrohome	0037
Electrophonic	0037
Emerex	0032
Emerson	0184, 0002, 0209, 0278, 0036, 0121, 0211, 0561, 0208, 0294, 0479, 0061, 0088, 0212, 0000, 0037, 0043, 0068, 0295, 0361
Fisher	0047, 0104, 0054, 0066
Fuji	0033, 0035
Funai	0000
GE	0035, 0060, 0048, 0202, 0240, 0760, 0761
Garrard	0000
Go Video	0432, 0526, 0232, 0643
GoldStar	0037, 0038
Gradiente	0008, 0000
Grundig	0195
HI-Q	0047
Harley Davidson	0000
Harman/Kardon	0038, 0081
Harwood	0068, 0072
Headquarter	0046
Hitachi	0042, 0105, 0000, 0041
Hughes Network Systems	0042
JVC	0067, 0008, 0041
Jensen	0041
KEC	0037, 0278
KLH	0072
Keen	0693
Kenwood	0041, 0067, 0038
Kodak	0035, 0037
LXI	0037
Lloyd's	0000, 0208
Logik	0072
MEI	0035
MGA	0043, 0061, 0240
MGN Technology	0240
MTC	0000, 0240
Magnasonic	0278
Magnavox	0035, 0081, 0110, 0563, 0000, 0039, 0149
Magnin	0240
Marantz	0081, 0035
Marta	0037
Matsushita	0035, 0162, 0454
Memorex	0104, 0047, 0479, 0000, 0037, 0048, 0035, 0046, 0240, 1037, 0307, 0039, 0162, 0209, 0454, 1162, 1262
Minolta	0105, 0042
Mitsubishi	0173, 0061, 0043, 0048, 0067
Motorola	0035, 0048
Multitech	0000, 0072
NAD	0058
NEC	0038, 0040, 0041, 0067, 0104
Nikko	0037
Nikon	0034, 0253
Noblex	0240
Olympus	0035
Optimus	0162, 0454, 1062, 1162, 0048, 0058, 1262, 0037, 1048, 0104, 0432
Optonica	0062
Orion	0479, 0002, 0184, 0209, 0295
Panasonic	0035, 0162, 0454, 1162, 0077, 1062, 1262, 1362, 0225, 0616
Penney	0035, 0240, 0037, 0042, 0038, 0040, 0054
Pentax	0042, 0105
Philco	0035, 0209, 0479
Philips	0081, 0035, 0062, 0618, 0110, 1081, 1181
Pilot	0037
Pioneer	0058, 0067
Polk Audio	0081
Portland	0020
Profitronic	0240
Proscan	0060, 0202, 0760, 0761
Protec	0072
Pulsar	0039, 0051
Quarter	0046
Quartz	0046
Quasar	0035, 0162, 0077, 0454, 1162
RCA	0060, 0149, 0202, 0042, 0058, 0105, 0035, 0048, 0077, 0106, 0240, 0760, 0761
Radio Shack	0000, 1037
Radix	0037
Randex	0037
Realistic	0000, 0104, 0047, 0048, 0037, 0035, 0062, 0046, 0066
ReplayTV	0614, 0616
Ricoh	0034, 0253
Runco	0039
STS	0042
Samsung	0045, 0051, 0053, 0240
Samtron	0643
Sanky	0039, 0048
Sansui	0041, 0479, 0000, 0067, 0209, 0271
Sanyo	0047, 0046, 0104, 0240
Scott	0184, 0211, 0121, 0043, 0045, 0210, 0212
Sears	0054, 0105, 0037, 0042, 0000, 0035, 0046, 0047, 0066, 0104
Semp.	0045
Sharp	0048, 0062, 0738
Shintom	0072
Shogun	0051, 0240
Singer	0072
Sony	0033, 0034, 0032, 0253, 0000, 0035, 0636, 1032
Sunpak	0253
Sylvania	0035, 0081, 0000, 0043, 0110
Symphonic	0000
TMK	0036, 0208, 0240
Tatung	0041
Teac	0000, 0041
Technics	0035, 0162
Teknika	0000, 0035, 0037
Thomas	0000
Tivo	0618, 0636
Toshiba	0045, 0210, 0212, 0043, 0066, 0366
Totevision	0037, 0240
Unitech	0240
Vector	0045
Vector Research	0038, 0040
Video Concepts	0040, 0045, 0061
Videosonic	0240
Wards	0035, 0060, 0062, 0000, 0047, 0212, 0240, 0042, 0048, 0072, 0081, 0149, 0760
White Westinghouse	0072, 0278, 0209
XR-1000	0072, 0000, 0035
Yamaha	0038
Zenith	0039, 0637, 0000, 0033, 0034, 0209, 0479

DVD BRAND	CODE
Aiwa	0641
Apex	0672, 0755
Audiologic	0736
B & K	0655, 0662
Denon	0490, 0634
Emerson	0591
Fisher	0670
GE	0522, 0717
GPX	0769
Go Video	0715
Gradiente	0651
Harman/Kardon	0582
Hitachi	0573, 0664
Hiteker	0672
JVC	0623, 0558
Kenwood	0737, 0682, 0534
Konka	0719, 0711, 0720, 0721
Magnavox	0503, 0675
Marantz	0539
Mitsubishi	0521
Onkyo	0627, 0503
Optimus	0571
Oritron	0651
Panasonic	0490, 0677, 0678, 0632
Philips	0539, 0503
Pioneer	0571, 0525, 0632
Princeton	0674
Proscan	0522
RCA	0522, 0571, 0704, 0717
Samsung	0573
Sanyo	0670
Sharp	0630
Sherwood	0633
Sony	0533
Technics	0490
Techwood	0692
Theta Digital	0571
Toshiba	0503
Yamaha	0490, 0545
Zenith	0591, 0503

CABLE BRAND	CODE
ABC	0003, 0007, 0008, 0011, 0014, 0017
Americast	0899
Bell & Howel	0014
Bell South	0899
Contec	0019
Everquest	0015
Gemini	0015
General Instrument	0276, 0476, 0011, 0810
GoldStar	0144
Hamlin	0020, 0009, 0273
Hitachi	0011
Hytex	0007
Jasco	0015
Jerrold	0003, 0012, 0276, 0014, 0476, 0011, 0015, 0810
Memorex	0000
Motorola	0476, 1106
Oak	0019, 0007
Optimus	0021
Pace	0237
Panasonic	0021, 0107, 0000
Paragon	0000
Philips	0305, 0317
Pioneer	0144, 0533, 0877, 1877
Pulsar	0000
Quasar	0000
RCA	0021
Radio Shack	0015
Regal	0273, 0279, 0020
Rembrandt	0011
Runco	0000
Samsung	0144
Scientific Atlanta	0008, 0017, 0477, 0877, 1877
Signal	0015
Signature	0011
Sony	1006
Sprucer	0021
Starcom	0003, 0015
Stargate	0015
Starquest	0015
Tocom	0012
Toshiba	0000
Tusa	0015
United Artists	0007
Zenith	0000, 0525, 0899

SATELLITE (Set-Top-Box)	CODE
AlphaStar	0772
Chaparra	0216
Echostar	1005, 0775
Expressvu	0775
GE	0566
General Instrument	0869
HTS	0775
Hitachi	0819
Hughes Network Systems	0749, 1142, 1749
JVC	0775
Magnavox	0722, 0724
Memorex	0724
Mitsubishi	0749
Next Level	0869
Panasonic	0247, 1189, 0701
Philips	1076, 1142, 0722, 0724, 0749
Proscan	0392
RCA	0566, 0392, 0143, 0855
Radio Shack	0869
Samsung	1109
Sony	0639
Star Choice	0869
Toshiba	0749, 0790
Uniden	0724, 0722
Zenith	0856

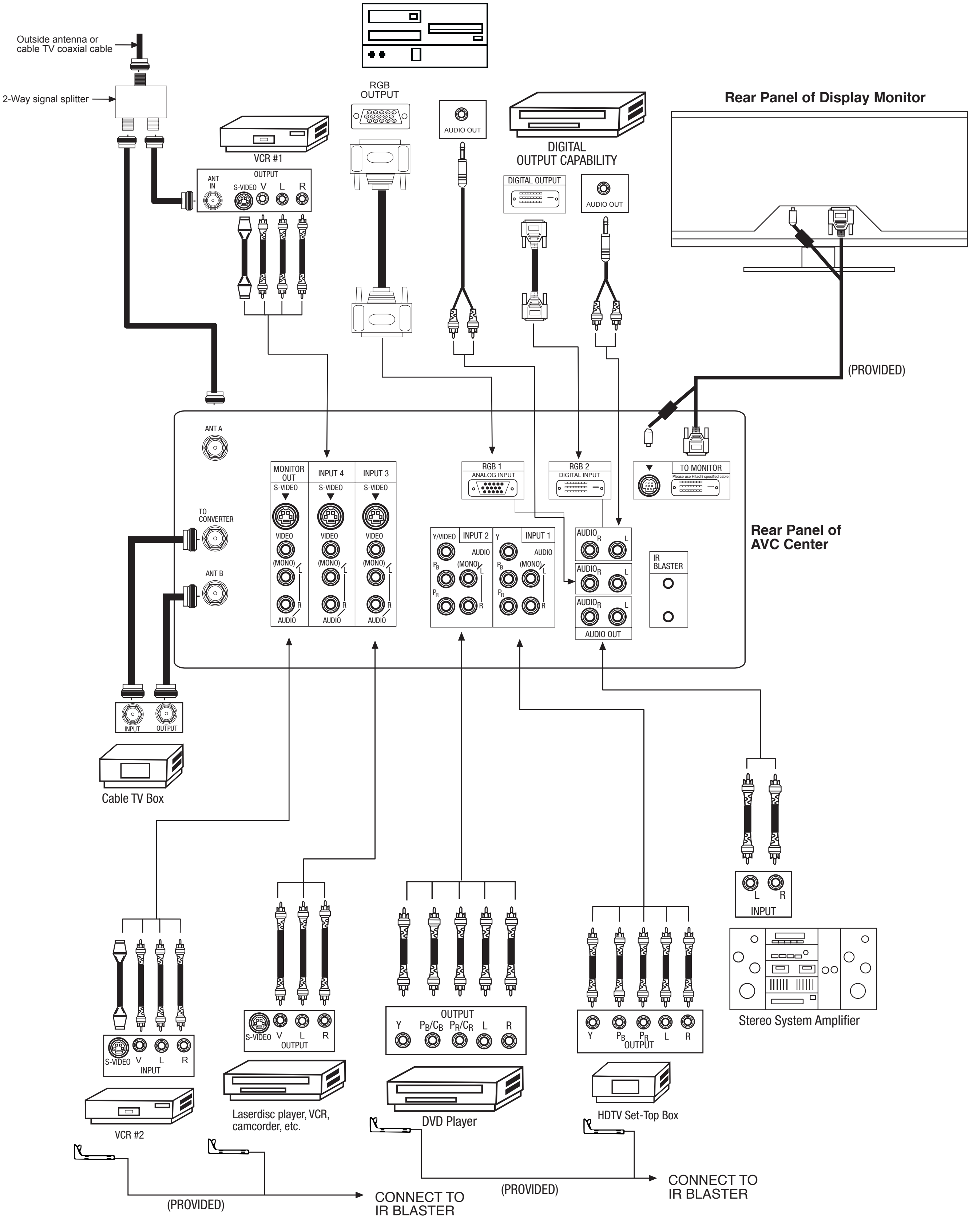
AMPLIFIER BRAND	CODE
Aiwa	0406
Carver	0269
Curtis Mathes	0300
Denon	0160
GE	0078
Harman/Kardon	0892
JVC	0331
Linn	0269
Luxman	0165
Magnavox	0269
Marantz	0269, 0321, 0892
Nakamichi	0321
Optimus	0395, 0300
Panasonic	0308
Parasound	0246
Philips	0269, 0892
Pioneer	0013, 0300
Polk Audio	0269, 0892
RCA	0300
Realistic	0395
Sansui	0321
Sony	0689, 0220
Soundesign	0078, 0211
Technics	0308, 0521
Victor	0331
Wards	0013, 0078, 0211
Yamaha	0354

RECEIVER BRAND (Amplifier)	CODE
ADC	0531
Aiwa	0121, 0405, 1405, 0158, 0189, 1089
Bose	1229
Capetronic	0531
Carver	0189, 0042, 1089, 1189
Casio	0195
Clarinette	0195
Compaq	1136
Curtis Mathes	0080
Denon	0004, 1160, 1104
Fisher	0042
Garrard	0463
Harman/Kardon	0891, 0110, 0189
Hewlett Packard	1181
JBL	0110
JVC	0074
Kenwood	0027, 1027, 1313, 0042, 0186, 1569, 1570
LXI	0181
Linn	0189
Lloyd's	0195
MCS	0039
Magnavox	0189, 0391, 1089, 0531, 1189, 0195
Marantz	0189, 1189, 1089, 0039
Modulaire	0195
Nakamichi	0097
Onkyo	0135
Optimus	1023, 0181, 0080, 0186, 0531, 0738, 0801, 0042, 0670
Panasonic	0039, 0367, 0309, 1518
Penney	0195
Philips	0189, 1089, 1120, 1189, 1269, 0391
Pioneer	0080, 0014, 0244, 0150, 0531, 0630, 1023
Polk Audio	0189
Proscan	1254
Quasar	0039
RCA	1254, 0531, 0080, 1023
Realistic	0181, 0195
Sansui	0189, 1089
Sanyo	0801
Sharp	0186
Sherwood	0502, 0491
Sony	0158, 1158, 1058, 1258, 0474
Soundesign	0670
Sunfire	1313
Teac	0463
Technics	0309, 0039, 1308, 1518, 1309
Thorens	1189
Victor	0074
Wards	0014, 0080, 0158, 0189
Yamaha	0176, 0186, 1176
Yorx.	0195
Zenith	0857

AUDIO BRAND	CODE
Aiwa	0010, 0159
Fisher	0052
JVC	0073
Jerrold	0459, 0520
Scientific Atlanta	0460
Sony	0159, 0010, 0576
Starcom	0459

SET TOP BOX BRAND	CODE
AOL	1061
Magnavox	0818
Mitsubishi	1002
Panasonic	1120
Philips	0818, 1061
Pioneer	1010
Princeton	0113, 0295
Samsung	1190
Sensory Science	1126
Sharp	1010
Sony	0850

REAR PANEL CONNECTIONS


Outside antenna or cable TV coaxial cable
2-Way signal splitter
VCR #1
ANT IN
OUTPUT
S-VIDEO V L R
RGB OUTPUT
AUDIO OUT
DIGITAL OUTPUT CAPABILITY
DIGITAL OUTPUT
AUDIO OUT
Rear Panel of Display Monitor
(PROVIDED)
ANT A
TO CONVERTER
ANT B
MONITOR OUT
INPUT 4
INPUT 3
S-VIDEO
VIDEO
(MONO)
L
R
AUDIO
RGB 1
ANALOG INPUT
RGB 2
DIGITAL INPUT
TO MONITOR
Please use Hitachi specified cable
Y/VIDEO
INPUT 2
INPUT 1
Y
P_B
P_R
AUDIO
AUDIO OUT
IR BLASTER
Rear Panel of AVC Center
INPUT
OUTPUT
Cable TV Box
L R
INPUT
Stereo System Amplifier
S-VIDEO V L R
INPUT
VCR #2
S-VIDEO V L R
OUTPUT
Laserdisc player, VCR, camcorder, etc.
OUTPUT
Y P_B/C_B P_R/C_R L R
DVD Player
Y P_B P_R L R
OUTPUT
HDTV Set-Top Box
(PROVIDED)
CONNECT TO IR BLASTER
(PROVIDED)
CONNECT TO IR BLASTER

NOTE:	Cables are optional, except when specified.

TIPS ON REAR PANEL CONNECTIONS

S-VIDEO connections are provided for high performance laserdisc players, VCRs etc. that have this feature. Use these connections in place of the standard video connection if your device has this feature.

If your device has only one audio output (mono sound), connect it to the left audio jack on the AVC Center.

Refer to the operating guide of your other electronic equipment for additional information on connecting your hook-up cables.

A single VCR can be used for VCR #1 and VCR #2, but note that a VCR cannot record its own video or line output (INPUT: 4 in the example on page 23). Refer to your VCR operating guide for more information on line input-output connections.

Connect only 1 component (VCR, DVD player, camcorder, etc.) to each input jack.

COMPONENT: $Y\text{-}P_BP_R$ (Input 1 & 2) connections are provided for high performance components, such as DVD players and set-top-boxes. Use these connections in place of the standard video connection if your device has this feature.

Your component outputs may be labeled Y, B-Y, and R-Y. In this case, connect the components B-Y output to the TV's P_B input and the components R-Y output to the TV's P_R input.

Your component outputs may be labeled $Y\text{-}C_BC_R$. In this case, connect the components C_B output to the TV's P_B input and the components C_R output to the TV's P_R input.

It may be necessary to adjust TINT to obtain optimum picture quality when using the $Y\text{-}P_BP_R$ inputs.

To ensure no copyright infringement, the MONITOR OUT output will be abnormal, when using the $Y\text{-}P_BP_R$ jacks.

Input 1 can accept component $Y\text{-}P_BP_R$ signal only.

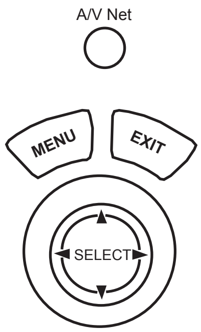
Input 2 can accept both component $Y\text{-}P_BP_R$ and composite video signal.

You may use VIDEO or S-VIDEO inputs to connect to INPUT 3, 4 or 5, but only one of these, VIDEO or S-VIDEO, may be used at a time for each input. S-VIDEO has priority over VIDEO.

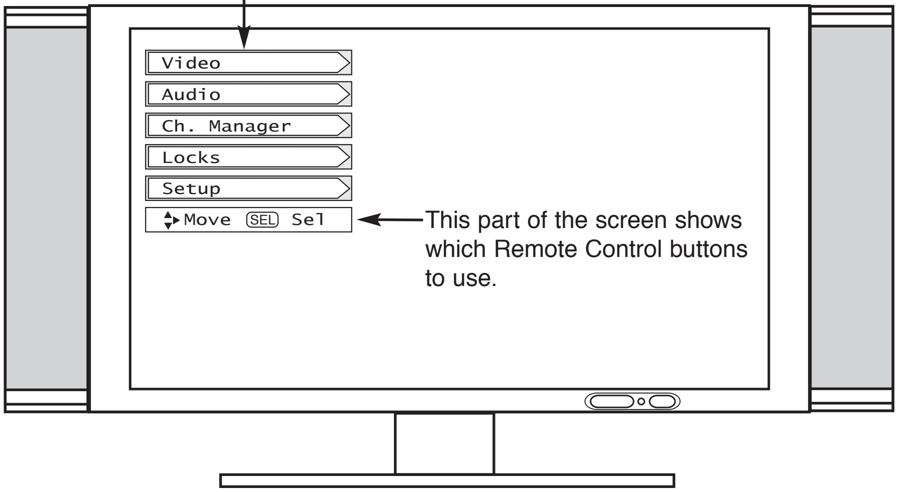
S-VIDEO output may be used for recording only when the input is of S-VIDEO type.

OSD MENU

1. Press MENU on the remote control to display the different features on your HITACHI Plasma TV.
2. Use the THUMB STICK to navigate to a different menu item.
3. Press EXIT on the remote control to quickly exit from a menu.
4. Press A/V NET on the remote control to access the A/V Network menu to control external components.


A/V Net
MENU
EXIT
SELECT

This part of the screen shows which selections are available.


Video
Audio
Ch. Manager
Locks
Setup
Move SEL Sel

This part of the screen shows which Remote Control buttons to use.

Video

Picture Mode	Select between the four picture modes; Sports, Movies, News, and Music.
Contrast	Adjust contrast.
Brightness	Adjust brightness.
Color	Adjust color.
Tint	Adjust tint.
Sharpness	Adjust sharpness.
Vertical Position	Centering top and bottom of the picture except HDTV signal.
Color System	Automatically change tint and color coordinates for DTV program.
Advanced Settings	Improve picture performance.

Audio

Treble	Adjust the treble.
Bass	Adjust the bass.
Balance	Adjust the balance.
Sound Enhancement	Select TruBass and Matrix surround settings.
Advanced Settings	Improve sound performance.

Channel Manager

Ant A	View/edit Channel ID, Scan, and Lock settings in antenna A.
Ant B	View/edit Channel ID, Scan, and Lock settings in antenna B.

Lock

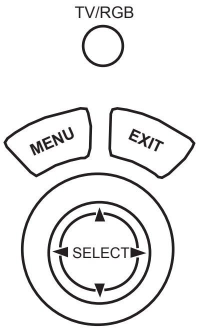
Change Access Code	Change Lock access code.
Engage Lock	Choose to lock channel, video input, and front panel.
TV Time Lock	Set specific time to Lock TV.
Movie Ratings	Block various types of movies and video types based on motion picture ratings.
TV Ratings	Block various types of movies and television programming based on a parental guide ratings.
Canadian Ratings (ENG)	Block various types of movies and television programming based on the Canadian ratings system.
Canadian Ratings (FRN)	Block various types of movies and television programming based on the Canadian French ratings system.

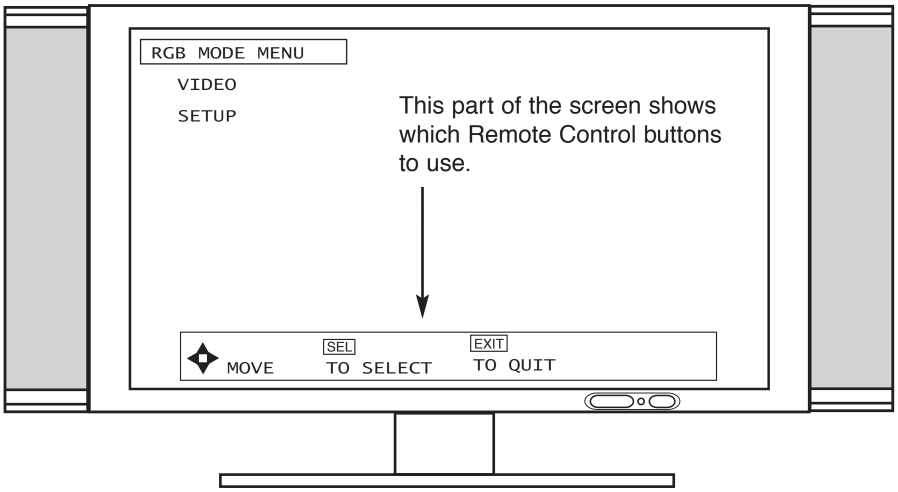
Setup

Menu Preference	Choose English, French, or Spanish text.
Screen Saver	Set Screen Saver to prevent screen burn.
Set the Clock	Set the TV clock. It must be set before using the Lock feature.
Set the Channels	Set Channel Source and Auto Channel Scan.
Set the Inputs	Label Video Inputs , VCR, DVD, etc.
Set Event Timer	Turn TV on and off once, daily, or weekly.
Set Closed Captions	Feature to display dialogue/text.

RGB ON SCREEN DISPLAY

1. Press TV/RGB button on the remote control to switch between TV, RGB1, and RGB2 modes.
2. Press MENU on the remote control to display the different features in RGB MODE.
3. Press the THUMB STICK ▲, ▼, ◄, ► buttons to highlight a different feature.
4. Press EXIT on the remote control to quickly exit from a menu.


TV/RGB
MENU
EXIT
SELECT


RGB MODE MENU
VIDEO
SETUP
MOVE
SEL
TO SELECT
EXIT
TO QUIT

This part of the screen shows which Remote Control buttons to use.

VIDEO

CONTRAST	Change the contrast between black and white levels in the picture.
BRIGHTNESS	Adjust overall picture brightness.
COLOR TEMPERATURE	Select between HIGH (9,300K), MEDIUM (7,500K) or STANDARD (6,500K).
ENHANCER	Enhance picture details.
RESET	Recall the factory preset data of the RGB Video Settings.
BLACK SIDE PANEL	Turns the gray side bars ON/OFF when watching 4:3 signals in standard mode.

SETUP

RGB:1 Analog Input Mode Menu

AUTO ADJUST	Automatically adjust the geometry to fit the screen.
H. POSITION	Adjust horizontal position.
V. POSITION	Adjust vertical position.
HORIZONTAL CLOCK	Adjusts the dot clock frequency to reduce the vertical stripe.
CLOCK PHASE	Adjusts the phase to correct blurred or unstable images.
RESET	Recall the factory preset data of the RGB setup settings.
RGB2 INPUT	This item only available with an RGB:2 input.
INPUT LEVEL	Set the preferred input signal level.

RGB:2 Digital Input Mode Menu

AUTO ADJUST	Automatically adjust the geometry to fit the screen.
H. POSITION	Adjust horizontal position.
V. POSITION	Adjust vertical position.
HORIZONTAL CLOCK	Adjusts the dot clock frequency to reduce the vertical stripe.
CLOCK PHASE	Adjusts the phase to correct blurred or unstable images.
RESET	Recall the factory preset data of the RGB setup settings.
RGB2 INPUT	Select between Mode:1 and Mode:2 input. (RGB:2 Input Only)
INPUT LEVEL	Set the preferred input signal level.

NOTE: RGB:1 Input does not have “RGB2 INPUT” feature.

ADJUSMENTS TABLE OF CONTENTS

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1. ADJUSTMENT PROCEDURE START-UP

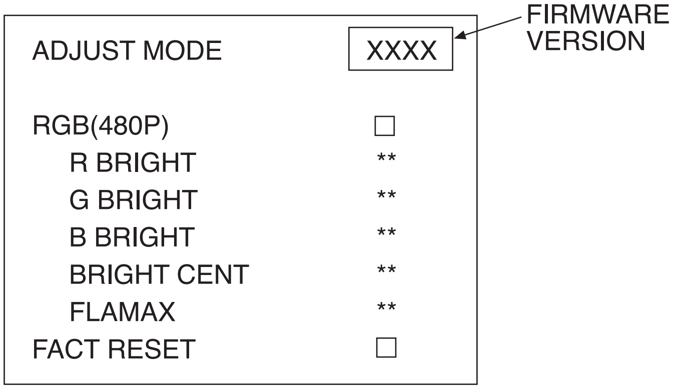
The 32/42HDT20 PDP TV set, undergoes through adjustment procedures during its assembly process. These adjustments must be done to assure the best performance of the PDP set for the consumer.

Also, after servicing, these same adjustments must be done. The adjustments are all made through the I^2C bus by changing data in the Adjustment mode menu.

Table 1 shows the complete parameter list with a brief description, signal format, the adjustment range, the initial data and the average adjustment values for the parameters that must be adjusted.

1-1 HOW TO GET TO ADJUSTMENT MODE

Chassis adjustment can be done by using the AVC20 front control panel buttons with PDP set turned off. Press “POWER” and “INPUT” keys at the same time, and hold for more than 3 seconds. Release the “POWER” button first and then immediately the “INPUT” button. The PDP set turns on in adjustment mode with OSD as follows.


ADJUST MODE XXXX

RGB(480P) ☐
  R BRIGHT **
  G BRIGHT **
  B BRIGHT **
  BRIGHT CENT **
  FLAMAX **
FACT RESET ☐

To escape from Adjustment Mode press “INPUT” key to exit service adjustment mode.
Table 1 can be found on the next pages.

BACK TO ADJUSTMENTS

Table 1 - Adjustment Mode codes and data (1 of 14)

ADJUSTMENT MODE	ADJUSTMENT ITEM		ADJUSTMENT RANGE (HEX)	INITIAL DATA (HEX)	ADJUST VALUE (HEX)
RGB					
R BRIGHT	Red Brightness Adjustment	480p	FF	5A	
		720p			
		PC		5A	
G BRIGHT	Green Brightness Adjustment	480p	FF	5A	
		720p			
		PC		5A	
B BRIGHT	Blue Brightness Adjustment	480p	FF	5A	
		720p			
		PC		5A	
BRIGHT CENT	Brightness Center	480p	FF	50	53
		720p	FF	50	53
		PC	FF	50	4E
FLAMAX	White Level Setting (FLAMAX)	480p	3F	26	3F
		720p			
		PC			
SUB TINT (TA1340F Main, TA1340F Sub)					
SUB TINT	Sub Tint Control (Main TV) 0:MIN (-7 deg) F:MAX (+7 deg)		0F	07	
SUB CONTRAST(M)	Sub Contrast Control (Main TV) 00:MIN (-3db) 1F:MAX (+3db)		1F		0B*
SUB CONTRAST(S)	Sub Contrast Control (Sub TV) 00:MIN (-3db) 1F:MAX (+3db)		1F		0A*
BURN-IN (PDP)					
BURN-IN	PDP Burn-In		02	01	
WHITE BALANCE (PDP)					
R DRV	Red Drive Gain Control	HIGH	FF	FF	
		MEDIUM		FF	
		STD		FF	
G DRV	Green Drive Gain Control	HIGH	FF	FF	
		MEDIUM		FF	
		STD		FF	
B DRV	Blue Drive Gain Control	HIGH	FF	FF	
		MEDIUM		FF	
		STD		FF	
UPD64083 (3D-YC) (B9H) Read Mode					
SYNCDET	Sync Detection 0: Sync, 1: No Sync		01	-	
F-STD	Frame Sync Nonstandard Detection 0: Standard 1: Nonstandard		01	-	
V-STD	Vertical Sync Nonstandard Detection 0: Standard 1: Nonstandard		01	-	
H-STD	Horizontal Sync Nonstandard Detection 0: Standard 1: Nonstandard		01	-	
NOISE	Noise Level Detection 00: Noise Small FF: Noise Large		FF	-	

* This data is an approximate service code data. Fine adjustment must be done using the specified test procedure and adjustment tools.

BACK TO ADJUSTMENTS

Table 1. - Adjustment Mode codes and data (2 of 14)

ADJUSTMENT MODE	ADJUSTMENT ITEM		ADJUSTMENT RANGE (HEX)	INITIAL DATA (HEX)	ADJUST VALUE (HEX)
UPD64083 (3D-7/C) (B8H)					
MSS	Compulsion Frame/Line Setting		03	00	
CDL-1	C Signal Delay Adjustment		07	04	
CDL-3	C Signal Delay Adjustment		07	04	
DYCO	Y Motion Detection Coring Level		0F	02	
DYGA	Y Motion Detection Gain		0F	09	
DCCO	C Motion Detection Coring Level		0F	03	
DCGA	C Motion Detection Gain		01	06	
YNRK	Frame Cycle CNR Non-linear Filter Gain		01	00	
YNRIN	Frame Cycle YNR Filter		03	00	
YNRLI	Frame Cycle YNR Non-linear Filter Limitter level		01	01	
CNRK	Frame Cycle CNR Filter Gain		01	00	
CNRIN	Frame Cycle CNR Non-linear Filter Limitter level		03	01	
VAPGA	Vertical Aperture Control Gain		07	05	
VAPIN	Vertical Aperture Control Invert		1F	0B	
YPFG	Y Peaking Filter Gain		0F	08	
YHCOR-1	Y Output High Frequency Coring		03	01	
YHCOR-3	Y Output High Frequency Coring		03	00	
TA1340F MAIN Read Mode (D9H)					
HSYNC-M	Main H-Sync Signal		FF	--	
VSYNC-M	Main V-Sync Signal		7F	--	
CSYNC-M	Main C-Sync Signal		01	--	
TA1340F SUB Read Mode (DBH)					
HSYNC-S	Sub H-Sync Signal		FF	--	
VSYNC-S	Sub V-Sync Signal		7F	--	
CSYNC-S	Sub C-Sync Signal		01	--	
TA1340F MAIN (D8H)					
M-CONT1	Sub Contrast Control 00: Min (-3db) 1F: Max (+3db)	Main TV	1F	0F	
M-CONT3		NTSC	1F	0C	
M-CONTD		480i/480p/720p/1080i /bypass(YPBPR/DVI)	1F	1A	
M-CLR-1	Sub Color Control 00: Min (-3db) 1F: Max (+3db)	Main TV	1F	0F	
M-CLR-3		NTSC	1F	0F	
M-CLR-D		480i/480p/720p/1080i /bypass(YPBPR/DVI)	1F	1B	
MTINT-1	Sub Tint Control 0: Min (-7 deg) F: Max (+7 deg)	Main TV	0F	07	
MTINT-3		NTSC	0F	07	
MTINT-D		480i/480p/720p/1080i /bypass(YPBPR/DVI)	0F	07	
MTOFF000	Main NTSC TOF Center Frequency Switch 0: OFF 1: MIN (0.8 fsc) 7: MAX (1.5 fsc)	TV/NTSC	07	00	
MT0FQ-O	Main NTSC TOF Q Characteristic Switch 0: MIN (0.6) 7: MAX (1.2)	TV/NTSC	07	00	

BACK TO ADJUSTMENTS

Table 1. - Adjustment Mode codes and data (3 of 14)

ADJUSTMENT MODE	ADJUSTMENT ITEM		ADJUSTMENT RANGE (HEX)	INITIAL DATA (HEX)	ADJUST VALUE (HEX)
TA1340F SUB (DAH)					
S-CONT2	Sub contrast Control	Sub TV	1F	0F	
S-CONT3	00: MIN (-3dB)	NTSC	1F	0D	
S-CONTD	1F: MAX (+3dB)	480i/480p/720p/1080i /Bypass(YPBPR/DVI)	1F	1A	
S-CLR-2	Sub Color Control	Sub TV	1F	0F	
S-CLR-3	00: MIN (-3dB)	NTSC	1F	0F	
S-CLR-D	1F: MAX (+3dB)	480i/480p/720p/1080i /Bypass (YPBPR/DVI)	1F	1B	
STINT-2	Sub Tint Control	Sub TV	0F	07	
STINT-3	0: MIN (-7deg)	NTSC	0F	07	
STINT-D	F: MAX (+7deg)	480i/480p/720p/1080i /Bypass (YPBPR/DVI)	0F	07	
STOFF00	Sub NTSC TOF Center Frequency Switch 0: off, 1: Min 0.8fsc 7: Max (1.5 fsc)	TV/NTSC	07	00	
STOFQ-0	Sub NTSC TOFQ Characteristic Switch 0: Min (0.6), 7: Max (1.2)	TV/NTSC	07	00	
TA1340F MAIN/SUB (D8H/DAH)					
Y-DL1-4	Y Delay Time Adjust 1	TV/NTSC	03	01	
Y-DL1-D	Base Band Section 0: -10 ns, 1: 0 ns 2: +10 ns, 3: +20 ns	480i/480p/720p/1080i /Bypass (YPBPR/DVI)	03	01	
Y-DL2-0	Y Delay Time Adjust 2 NTSC section 0: off 1: +40 ns 2: +80 ns, 3: +120 ns	ALL	03	00	
YBLACK4	Y Black Level Control	TV/NTSC	FF	00	
YBLACKD	00: Off 01: Min FF: Max	480i/480p/720p/1080i /Bypass (YPBPR/DVI)	FF	00	
BBLACK4	CB(PB) Black Level	TV/NTSC	FF	00	
BBLACKD	Control 00: Off 01: Miin FF: Max	480i/480p/720p/1080i /Bypass (YPBPR/DVI)	FF	00	
RBLACK4	CR(PR) Black Level	TV/NTSC	FF	00	
RBLACKD	Control 00: Off 01: Miin FF: Max	480i/480p/720p/1080i /Bypass (YPBPR/DVI)	FF	00	
AFCRAN4	Horizontal AFC Switch	TV/NTSC	01	00	
AFCRAND	0: Normal 1: Narrow	480i/480p/720p/1080i /Bypass (YPBPR/DVI)	01	00	
F-DET-4	Frequency Detection	TV/NTSC	03	00	
F-DET-D	Input Switch 0: 480I-1 TV/NTSC 1: 480I-2 TV/NTSC 2: D-SYNC2 3: HD/VD		03	00	
HSEPL-4	Horizontal Sync	TV/NTSC	03	00	
HSEPL-5	Separation	480i	03	00	
HSEPL-6	Level Switch	480p	03	00	
HSEPL-C	0: 20%, 1: 27% 2: 34%, 3: 40%	720p/1080i/Bypass	03	00	

BACK TO ADJUSTMENTS

Table 1. - Adjustment Mode codes and data (4 of 14)

ADJUSTMENT MODE	ADJUSTMENT ITEM		ADJUSTMENT RANGE (HEX)	INITIAL DATA (HEX)	ADJUST VALUE (HEX)
TA1340F MAIN/SUB (D8H/DAH) Cont.					
VSEPL-4	Vertical Sync	TV/NTSC	03	00	
VSEPL-5	Separation	480i	03	00	
VSEPL-6	Level Switch	480p	03	00	
VSEPL-C	0: 40% 1: 50% 2: 60% 3: 70%	720P/1080i/Bypass	03	00	
DSEPL-A	D-SYNC2-IN SYNC	480i/480p	03	00	
DSEPL-C	Separation Level Switch 0: 20% 1: 30% 2: 40% 3: 50%	720p/1080i/Bypass	03	00	
AFCMD-L	AFC Gain Switch	TV	07	02	
AFCMD-3	0: Auto1 , 1: Auto 2	NTSC	07	02	
AFCMD-D	2: Auto 3, 3: Auto 4 4: +6dB, 5: 0dB, 6: -12dB 7: off (Horizontal free run)	480i/480p/720p /1080i/Bypass	07	00	
VMODE-4	Vertical Sync Mode	TV/NTSC	01	00	
VMODE-5	Switch 0: Normal PLL Mode 1: Sync Output Mode	480i	01	00	
48ISEP4	480i Separator Mode Switch 0: On, 1: Off	TV/NTSC	01	01	
BANDW-L	Band Width Filter	TV	03	02	
BANDW-3	Switch	NTSC	03	02	
BANDW-5	0:Off, 1: 4.2MHz 2: 11.3MHz, 3: Mute	480i	03	02	
HDP0SI4	HD Output Phase	TV/NTSC	0F	08	
HDPOSI5	Adjustment	480i	0F	09	
HDPOSI6	0: 800 ns Advance	480p	0F	01	
HDPOSI7	F: Sync Center	720p	0F	08	
HDPOSIK		1080i/bypass	0F	00	
OSD-HP	OSD Horizontal Position		7F	45	
OSD-VP	OSD Vertical Position		7F	18	

BACK TO ADJUSTMENTS

Table 1. - Adjustment Mode codes and data (5 of 14)

ADJUSTMENT MODE	ADJUSTMENT ITEM		ADJUSTMENT RANGE (HEX)	INITIAL DATA (HEX)	ADJUST VALUE (HEX)
TA1399N MAIN/SUB (88H)					
SCONT-M	Sub Contrast (Main)		7F	31	
SUB-BRT	Sub Brightness Adjustment		FF	85	
COLOR-F	Color	NT1/2/HD3/4/6	7F	4B	
COLOR-G	(Center Adjustment)	NT3/HD1/2/5/MUSE	7F	50	
TINT-F	Tint	NT1/2/HD3/4/6	7F	4E	
TINT-G	(Center Adjustment)	NT3/HD1/2/5/MUSE	7F	48	
YNR	YNR		07	00	
SHARP-4	Sharpness Adjustment	NT1	1F	09	
SHARP-5		NT2/NT3	1F	06	
SHARP-6		HD2/HD3	1F	0F	
SHARP-7		HD5/HD6	1F	06	
SHARP-8		HD1/HD4/MUSE	1F	06	
WPSL	White Peak Suppressing Level		01	01	
HIBRT	High Bright color		01	00	
Y-DL-L	Group Delay correction	NT1-TV	1F	14	
Y-DL-3		NT1-VID	1F	10	
Y-DL-A		NT2/NT3/HD2/HD3	1F	12	
Y-DL-B		HD1/4/5/6/MUSE	1F	10	
COLORG0	Color Gamma Correction Point		03	02	
CLT	Color Limiter Level		01	00	
Y-GCURV	Y-Gamma Curve SW		03	03	
SCONT-S	Sub Contrast Adjustment (SUB)		1F	0F	
Y-OUTG	Y-OUT Gamma SW		01	01	
G-DRV	Green Drive Gain Adjustment		7F	3F	
B-DRV	Blue Drive Gain Adjustment		7F	3F	
R-CUT	Red Cut-off Adjustment		FF	7F	
G-CUT	Green Cut-off Adjustment		FF	7F	
B-CUT	Blue Cut-off Adjustment		FF	7F	
GB-GA-F	G/B Relative Amplitude SW	NT1/2/HD3/4/6	03	00	
GB-GA-G		NT3/HD1/2/5/MUSE	03	02	
GY-PH-F	G/B Relative Amplitude SW	NT1/2/HD3/4/6	03	00	
GY-PH-G		NT3/HD1/2/5/MUSE	03	02	
RB-GA-F	R/B Relative Amplitude SW	NT1/2/HD3/4/6	03	02	
RB-GA-G		NT3/HD1/2/5/MUSE	03	03	
RY-PH-F	R/B Relative Amplitude SW	NT1/2/HD3/4/6	03	02	
RY-PH-G		NT3/HD1/2/5/MUSE	03	02	
APRTR-M	APACON Peak Freq. SW	NTSC/Multi	07	07	
APRTR-N		HD	07	05	
APL/BSP	APL Level VS Black Stretch Start Point		03	03	
CDE	Color Detail Enhancer		03	02	
Y-GPNT	Y-Gamma Point SW		01	01	
BSP	Black Stretch Point		07	06	
BDL	Black Detection Level SW		01	01	
BLC	Black Level Automatic Correction		01	00	
BSG	Black Stretch Gain SW		01	00	

BACK TO ADJUSTMENTS

Table 1. - Adjustment Mode codes and data (6 of 14)

ADJUSTMENT MODE	ADJUSTMENT ITEM		ADJUSTMENT RANGE (HEX)	INITIAL DATA (HEX)	ADJUST VALUE (HEX)
TA1399N MAIN/SUB (88H)					
SHTRK-M	Sharpness Tracking	NTSC/Multi	03	01	
SHTRK-N		HD	03	01	
BLUE-GA	Blue Stretch Gain		3F	00	
BLUE-SP	Blue Stretch Point		7F	7F	
MSC Read Mode					
MSC-VER	MSC Version Display		7F	-	
R-CONT	Automatic Contrast Adjustment Display		7F	-	
MAX-LVL	Maximum Signal Level Display		FF	-	
MIN-LVL	Minimum Signal Level Display		FF	-	
FLAON	Automatic Signal Adjustment (FLAON)		-	-	
FLAMAX	White Level Setting (FLAMAX)		3F	23	
852/512	852 x 512 Dot Display		01	00	
OSDBLND	OSD2 Blend		0F	02	
AUTOADJ	PC Auto Adjusment 0: AUTO1, 1: AUTO2		01	00	
ENHLEVA	Level Expansion Enhancer	NTSC/HD2/HD3/Multi	1F	00	
ENHLEV7		HD5/HD6	1F	00	
ENHLEV8		HD1/HD4	1F	00	
ENHLEVH		PC ENHANCER: ON	1F	08	
NLEKA	Nonlinear Expansion Coefficient	NTSC/HD2/HD3/Multi	07	00	
NLEK7		HD5/HD6	07	00	
NLEK8		HD1/HD4	07	00	
PLMSKSA	PLL Mask Start Point	NTSC/HD2/HD3	FF	86	
PLMSKS7		HD5/HD6	FF	7C	
PLMSKS8		HD1/HD4	FF	7E	
PLMSKSH		PC	FF	7E	
PLMSKWA	PLL Mask Width	NTSC/HD2/HD3	FF	00	
PLMSKW7		HD5/HD6	FF	1D	
PLMSKW8		HD1/HD4	FF	16	
PLMSKWH		PC	FF	01	
M_CNT_4	Contrast Center	TV/VID	7F	3C	
M_CNT_A	Contrast Center Offset	NT2/NT3/HD2/HD3	7E	3F	
M_CNT_H	Contrast Center	PC	7F	3C	
M_CNT_E	Contrast Center Offset	Multi	3C	3C	
M_BRT_4	Black Level Center	NT1/Multi	FF	56	53
M_BRT_A		NT2/NT3/HD2/HD3	FF	50	53
M_BRT_B		HD1/HD4/HD5/HD6/MUSE	FF	50	
M_BRT_H		PC	FF	50	4E
PCIN1V	PC Input Level Adjustment		7F	24	
NRMLCNT	Normal Real Wide Contrast Max		7F	5E	
R-BRT-D	R-Black Level	TV/VID	FF	5A	
R-BRT-H		PC	FF	5A	
B-BRT-D	B-Black Level	TV/VID	FF	5A	
B-BRT-H		PC	FF	5A	
G-BRT-D	G-Black Level	TV/VID	FF	5A	
G-BRT-H		PC	FF	5A	

BACK TO ADJUSTMENTS

Table 1. - Adjustment Mode codes and data (7 of 14)

ADJUSTMENT MODE	ADJUSTMENT ITEM		ADJUSTMENT RANGE (HEX)	INITIAL DATA (HEX)	ADJUST VALUE (HEX)
MSC.					
ATCNTWD	Auto. Contrast On/Off/Width	TV/VID	0F	08	
ATCNTSP	Automatic Contrast Speed	TV/VID	07	03	
R-CNT-D	R-Contrast	TV/VID	7F	40	
G-CNT-D	G-Contrast	TV/VID	7F	40	
B-CNT-D	B-Contrast	TV/VID	7F	40	
R-CNT-H	R-Cotnrast	PC	7F	40	
G-CNT-H	G-Contrast	PC	7F	40	
B-CNT-H	B-Contrast	PC	7F	40	
CLUMPS4	Clamp Pulse Start Point	NT1/NT2/NT3	FF	80	
CLUMPS6		HD2/HD3	FF	80	
CLUMPS7		HD5/HD6	FF	80	
CLUMPS8		HD1/HD4/MUSE	FF	80	
CLUMPSE		2pic/still	FF	80	
CLUMPSX		4 pix	FF	82	
CLUMPW4	Clamp Pulse Width	NT1/NT2/NT3	3F	07	
CLUMPW6		HD2/HD3	3F	07	
CLUMPW7		HD5/HD6	3F	07	
CLUMPW8		HD1/HD4/MUSE	3F	07	
CLUMPWE		2 pic/still	3F	7	
CLUMPWX		4 pix	3F	07	
MOVEVAL	Screen Saver Moving Mode		03	00	
MOVETM1	Screen Saver Moving Time	Mode 1	3C	14	
MOVETM2		Mode 2	3C	28	
MOVETM3		Mode 3	3C	3C	
PCWAKU	PC Frame Contrast		7F	2C	

BACK TO ADJUSTMENTS

Table 1. - Adjustment Mode codes and data (8 of 14)

ADJUSTMENT MODE	ADJUSTMENT ITEM		ADJUSTMENT RANGE (HEX)	INITIAL DATA (HEX)	ADJUST VALUE (HEX)
TA1340F SUB (DAH)					
4x3 DET	4 X 3 Signal Detection		01	-	
PSTART	Aspect Detection Picture Vertical Start Position		FF	-	
PEND	Aspect Detection Picture Vertical End Position		FF	-	
TEND	Aspect Detection Text Vertical End Position		FF	-	
TVCINE	TV/Cinema/3-2 Pull Down Signal Detection		01	-	
MPLLH-L	Main H-Sync Horizontal Phase	Main-TV	1F	0F	
MPLLH-5		Main-NT2/NT3	1F	0C	
MPLLH-6		Main-HD2/HD3	1F	0E	
MPLLH-7		Main-HD5/HD6	1F	11	
MPLLH-8		Main-HD1/HD4/MUSE	1F	11	
MPLVMS4	Main PLL_V Mask Pulse Start Position Offset	Main-NTSC	1F	12	
MPLVMS6		Main-HD2/HD3	1F	10	
MPLVMS7		MainHD5/HD6	1F	0F	
MPLVMS8		Main-HD1/HD4	1F	10	
MPLVME4	Main PLL_V Mask Pulse End Position Offset	Main-NTSC	1F	0C	
MPLVME6		Main-HD2/HD3	1F	11	
MPLVME7		Main-HD5/HD6	1F	0F	
MPLVME8		Main-HD1/HD4	1F	11	
MISMD-4		Main-TV	07	05	
MISMD-5		Main-NT2/NT3	07	05	
MISMD-6		Main-HD2/HD3	07	05	
MISMD-7		Main-HD5/HD6	07	06	
MIDMD-8		Main-HD1/HD4	07	04	
MYCLPL4	Main Y Clamp Reference	Main	07	03	
SPLLH-4	Sub H-sync Horizontal Phase	Sub-TV	1F	0A	
SPLLH-5		Sub-NT2/NT3	1F	08	
SPLLH-6		Sub-HD2/HD3	1F	0C	
SPLLH-7		Sub-HD5/HD6	07	06	
SPLLH-8		Sub-HD1/HD4/MUSE	1F	0C	
SPLVMS4	Sub PLL_V Mask Pulse Start Position Offset	Sub-NTSC	1F	13	
SPLVMS65		Sub-HD2/HD3	1F	11	
SPLVMS7		Sub-HD5/HD6	1F	11	
SPLVMS8		Sub-HD1/HD4	1F	11	
SPLVME4	Sub PLL_V Mask Pulse End Position Offset	Sub-NTSC	1F	0D	
SPLVME6		Sub-HD2/HD3	1F	11	
SPLVME7		Sub-HD5/HD6	1F	10	
SPLVME8		Main-HD1/HD4	1F	11	
SISMD-4	VW Horizontal Phase	Sub-TV	07	05	
SISMD-5		Sub-NT2/NT3	07	05	
SISMD-6		Sub-HD2/HD3	1F	11	
SISMD-7		Sub-HD5/HD6	07	06	
SISMD-8		Sub-HD1/HD4	07	04	
SYCLPL4	Sub Y Clamp Reference		07	03	
C_MOV	C Forced Motion		01	00	
IP_MODE	IP Mode		01	00	

BACK TO ADJUSTMENTS

Table 1. - Adjustment Mode codes and data (9 of 14)

ADJUSTMENT MODE	ADJUSTMENT ITEM		ADJUSTMENT RANGE (HEX)	INITIAL DATA (HEX)	ADJUST VALUE (HEX)
FC					
YKLV_D	Y Frame Bright	TV/VID-except Multi	7F	60	
YKLV_3		TV/VID-Multi	7F	60	
RHCTD_4	Read Frequency Divider Ratio Offset	NTSC	1F	0F	
RHCTD_6		HD2/HD3/Multi	1F	0F	
RHCTD_7		HD5/HD6	1F	0F	
RHCTD_8		HD1/HD4	1F	0F	
FRMT	Frame Top Position		0F	07	
FRMB	Frame Bottom Position		0F	07	
FRMR-4	Frame Right Position	Normal-NTSC	0F	08	
FRMR-6		Normal-HD2/HD3	0F	08	
FRML-4	Frame Left Position	Normal-NTSC	0F	08	
FRML-6		Normal-HD2/HD3	0F	07	
MHVAR-4	AD Clock Phase	NT1	3F	00	
MHVAR-5		NT2/NT3	3F	00	
MHVAR-6		HD2/HD3	3F	00	
MHVAR-7		HD5/HD6	3F	00	
MHVAR-8		HD1/HD4	3F	00	
BBLKLV4	B-Y/B Blanking Level	NT1/Multi	0F	07	
BBLKLV5		NT2/NT3	0F	07	
BBLKLV6		HD2/HD3	0F	07	
HFL-M	H Filter Select	NTSC/Multi	01	01	
HFL-N		HD	01	00	
RBLKLV4	R-Y/R Blanking Level	NT1/Multi	0F	07	
RBLKLV5		NT2/NT3	0F	07	
RBLKLV6		HD2/HD3	0F	07	
ENH-V-4	Vertical Enhancer	NT1/NT2/NT3/Multi	03	00	
ENH-V-6		HD2/HD3	03	00	
VECRG-4	Vertical Enhance Coring	NT1/NT2/NT3/Multi	03	00	
VECRG-6		HD2/HD3	03	00	
ENH-H-4	Horizontal Enhancer	NT1/NT2/NT3/Multi	03	00	
ENH-H-6		HD2/HD3	03	00	
HECRG-4	Horizontal Enhance Coring	NT1/NT2/NT3/Multi	03	00	
HECRG-6		HD2/HD3	03	00	
VDPOS-4	VD Position Offset	NT1	7F	41	
VDPOS-5		NT2/NT3	7E	3F	
VDPOS-6		HD2/HD3/Multi	7E	3F	
VDPOS-7		HD5/HD6	7E	3F	
VDPOS-8		HD1/HD4	7E	3F	
HDPOS-4	HD Position Offset	NT1	7F	3A	
HDPOS-5		NT2/NT3	7E	3E	
HDPOS-6		HD2/HD3/Multi	7E	3E	
HDPOS-7		HD5/HD6	7E	1B	
HDPOS-8		HD1/HD4/MUSE	7E	0A	

BACK TO ADJUSTMENTS

Table 1. - Adjustment Mode codes and data (10 of 14)

ADJUSTMENT MODE	ADJUSTMENT ITEM		ADJUSTMENT RANGE (HEX)	INITIAL DATA (HEX)	ADJUST VALUE (HEX)
FC					
HBLKR-4	Horizontal BLK Right Position	NT1	FF	99	
HBLKR-5		NT2/NT3	FE	7F	
HBLKR-6		HD2/HD3/4pix	FF	9C	
HBLKR-7		HD5/HD6	FF	77	
HBLKR-8		HD1/HD4/MUSE	FE	77	
HBLKR-E		2pix/Freeze	FE	7F	
HBLKL-4	Horizontal BLK Left Position	NT1	FF	7F	
HBLKL-5		NT2/NT3	FE	7F	
HBLKL-6		HD2/HD3/4pix	FF	7F	
HBLKL-7		HD5/HD6	FF	86	
HBLKL-8		HD1/HD4/MUSE	FE	86	
HBLKL-E		2pix/Freeze	FE	7F	
CBK	C Motion Detection		01	00	
VT	Vertical Time Axle Filter Interpolation		01	01	
YBK	Y Motion Detection		01	00	
BKMKT-4	Black Stretch Stop Pulse Top Position Offset	NT1/NT2/NT3	0F	07	
BKMKT-6		HD2/HD3	0F	07	
BKMKT-7		HD5/HD6	0F	07	
BKMKT-8		HD1/HD4	0F	07	
BKMKT-E		2pix/Freeze	0F	07	
BKMKT-X		4pix	0F	07	
BKMKB-4	Black Stretch Stop Pulse Bottom Position Offset	NT1/NT2/NT3	0F	07	
BKMKB-6		HD2/HD3	0F	07	
BKMKB-7		HD5/HD6	0F	07	
BKMKB-8		HD1/HD4	0F	07	
BKMKB-E		2pix/Freeze	0F	07	
BKMKB-X		4pix	0F	07	
BKMKR-4	Black Stretch Stop Pulse Right Position Offset	NT1/NT2/NT3	0F	07	
BKMKR-6		HD2/HD3	0F	07	
BKMKR-7		HD5/HD6	0F	07	
BKMKR-8		HD1/HD4/MUSE	0F	07	
BKMKR-E		2pix	0F	07	
BKMKR-X		4pix	0F	07	
BKMKL-4	Black Stretch Stop Pulse Left Position Offset	NT1/NT2/NT3	0F	07	
BKMKL-6		HD2/HD3	0F	07	
BKMKL-7		HD5/HD6	0F	07	
BKMKL-8		HD1/HD4/MUSE	0F	07	
BKMKL-E		2pix/Freeze	0F	07	
BKMKL-X		4pix	0F	07	
RDCSFT4	DC Shift YNR	NT1	03	00	
YDCSFT6		NT2/NT3	03	01	
YDCSFT6		HD2/HD3	03	01	
YDCSFTE		Multi	03	00	

BACK TO ADJUSTMENTS

Table 1. - Adjustment Mode codes and data (11 of 14)

ADJUSTMENT MODE	ADJUSTMENT ITEM		ADJUSTMENT RANGE (HEX)	INITIAL DATA (HEX)	ADJUST VALUE (HEX)
FC					
YVCLP-M	Y/G Vertical CLIP Offset Level	NTSC/Multi	0F	00	
YVCLP-N		HD	0F	00	
YVDSBGM	Y/G Vertical DSB Gain	NTSC/Multi	03	00	
YVDSBGN		HD	03	03	
YVDSBCM	Y/G Vertical DSB Coring	NTSC/Multi	07	01	
YVDSBCN		HD	07	00	
VCLP-M	Y/G Vertical Enhancer Clip ON/OFF	NTSC/Multi	01	01	
VCLP-N		HD	01	01	
YVGAINM	Y/G Vertical Enhancer Gain	NTSC/Multi	0F	06	
YVGAINN		HD	0F	04	
YN	YFRNR ON/OFF		FF	FF	
YK1-L	YFRNR Input Gain	NT1-TV	07	01	
YK1-3		NT1-(YC)/VID	07	04	
YK1-5		NT2/NT3	07	04	
YK1-6		HD2/HD3	07	04	
YK1-E		2pix/4pix/Still	07	04	
CVDSBGM	B-Y/B, R-Y/R Vertical DSB Gain	NTSC/Multi	03	00	
CVDSBGN		HD	03	00	
CVDSBCM	B-Y/B, R-Y/R Vertical Coring	NTSC/Multi	07	00	
CVDSBCN		HD	07	00	
CVGAINM	B-Y/B, R-Y/R Vertical Enhancer Gain	NTSC/Multi	0F	0F	
CVGAINN		HD	0F	09	
CN	CFRNR ON/OFF		FF	FF	
CK1-4	CFRNR Input Gain	NT1	07	04	
CK1-5		NT2/NT3	07	04	
CK1-6		HD2/HD3	07	04	
CK1-E		2pix/4pix/Still	07	04	
CDCSFT4	DC Shift CNR	NT1	03	00	
CDCSFT5		NT2/NT3	03	00	
CDCSFT6		HD2/HD3	03	00	
CDCSFTE		Multi	03	00	
YHCLP-M	Y/G Horizontal CLIP Offset Level	NTSC/Multi	0F	00	
YHCLP-N		HD	0F	00	
YHDSBGM	Y/G Horizontal DSB Gain	NTSC/Multi	03	00	
YHDSBGN		HD	03	02	
YHDSBCM	Y/G Horizontal DSB Coring	NTSC/Multi	07	01	
YHDSBCN		HD	07	00	
YFILT-M	Y/G Vertical HPF Peak Frequency Change	NTSC/Multi	03	02	
YFILT-N		HD	03	00	
HCLP-M	Y/G Vertical Enhancer CLIP ON/OFF	NTSC/Multi	01	01	
HCLP-N		HD	01	01	
YHGAINM	Y/G Vertical Enhancer Gain	NTSC/Multi	0F	07	
YHGAINN		HD	0F	06	

BACK TO ADJUSTMENTS

Table 1. - Adjustment Mode codes and data (12 of 14)

ADJUSTMENT MODE	ADJUSTMENT ITEM		ADJUSTMENT RANGE (HEX)	INITIAL DATA (HEX)	ADJUST VALUE (HEX)
FC					
YNL-4	YFRNR Passage Level	NT1	07	00	
YNL-5		NT2/NT3	07	00	
YNL-6		HD2/HD3	07	00	
YNL-E		2pix/4pix/Still	07	00	
CHDSBGM	B-Y/B, R-Y/R Vertical DSB Gain	NTSC/Multi	03	00	
CHDSBGN		HD	03	00	
CHDSBCM	B-Y/B, R-Y/R Vertical DSB Coring	NTSC/Multi	07	00	
CHDSBCN		HD	07	00	
CFILT-M	B-Y/B, R-Y/R Vertical HPF Peak Frequency Change	NTSC/Multi	03	02	
CFILT-N		HD	03	02	
CHGAINM	B-Y/B, R-Y/R Vertical Enhancer Gain	NTSC/Multi	0F	0F	
CHGAINN		HD	0F	09	
CNL-4	CFRNR Passage Level	NT1	07	02	
CNL-5		NT2/NT3	07	02	
CNL-6		HD2/HD3	07	02	
CNL-E		2pix/4pix/Still	07	02	
YCRG-M	Y/G Coring Amplitude	NTSC	07	00	
YCRG-E		2pix/Still	07	01	
YLMT-M	Y/G Amplitude Limit Value	NTSC/Multi	FF	FF	
YLMT-N		HD	FF	FF	
YVHG-M	Y/G Vertical & Horizontal Enhancer Gain	NTSC	1F	0B	
YVHG-N		HD	1F	00	
YVSPL-M	Y/G Vertical Non Linear Peaking	NTSC/Multi	3F	02	
YVSPL-N		HD	3F	3F	
CCRG-M	B-Y/B, R-Y/R Coring Amplitude	NTSC/Multi	07	01	
CCRG-N		HD	07	01	
CVHG-M	B-Y/B, R-Y/R Vertical & Horizontal Enhancer Gain	NTSC/Multi	1F	1F	
CVHG-N		HD	1F	00	
YHSPL-M	Y/G Vertical Non-Linear Peaking	NTSC/Multi	3F	02	
YHSPL-N		HD	3F	3F	
CLAMP-M	Clamp Output	NT1/NT2/NT3	FF	7F	
CLAMP-6		HD2/HD3	FF	7F	
CLAMP-7		HD5/HD6	FF	7F	
CLAMP-8		HD1/HD4/MUSE	FF	75	
CLAMP-E		2pix/Freeze	FF	7F	
CLAMP-X		4pix	FF	7F	
WIDTHS	43V Gate Start Offset		0F	02	
WIDTHE	43V Gate Start Offset		0F	02	
V2-ST	V Gate Start Position		7F	02	
V2-EN	V Gate End Position		FF	EC	
H1-ST	H Gate Start Position		FF	78	
H1-EN	H Gate End Position		FF	A8	
B-SL-LV	Black Detect Slice Level		7F	3F	
H2-ST	Title H-Gate Start Offset		FF	DC	
H2-EN	Title H-Gate End Offset		FF	44	

BACK TO ADJUSTMENTS

Table 1. - Adjustment Mode codes and data (13 of 14)

ADJUSTMENT MODE	ADJUSTMENT ITEM	ADJUSTMENT RANGE (HEX)	INITIAL DATA (HEX)	ADJUST VALUE (HEX)
FC				
CMPRG21	Distribution value slice level for subtitle picture end position	FF	19	
CMPRF1	Bright Slice Level	FF	23	
CMPRG22	Distribution value slice level for non-subtitle picture end position	FF	20	
CMPRF23	4x3 detection distribution value slice level	FF	A0	
43-FLG5	4x3 detection	01	01	
LOCK	TV/Cinema Lock Count	07	03	
UNLOCK	TV/Cinema Unlock Count	07	01	
VGATEE	TV/Cinema Vertical Gate Offset	0F	07	
ST-FLG1	Start Line Judgement	01	00	
BK-FLG4	Black Detection Judgement	01	00	
EN-FLG3	Aspect Detection No-Text Vertical End Position	01	00	
TX-FLG2	Aspect Detection Text Vertical End Position	01	00	
CDEGREF	TV/Cinema Detection Color 2 Bit Border Volume Offset	0F	07	
YDEGREF	TV/Cinema Detection Y 2 Bit Border Volume Offset	0F	07	
CINEREF	TV/Cinema Detection Motion Area Border Volume Offset	FF	05	
RDLY-B	R B-Y Delay	03	00	
RDLY-R	R R-Y Delay	03	00	
RDLY-Y	R Y Delay	03	00	
WDLY-B	W B-Y Delay	03	01	
WDLY-R	W R-Y Delay	03	01	
WDLY-Y	W Y Delay	03	01	
CDLY	2H C Signal 1CK Delay	01	00	
YDLY	2H Y Signal 1CK Delay	01	00	
MPLLH-3	H-Sync Vertical Phase	1F	0E	
MB90098A				
OSD-HP	PC OSD Horizontal Position	0F	07	
OSD-VP	PC OSD Vertical Position	0F	07	

BACK TO ADJUSTMENTS

Table 1. - Adjustment Mode codes and data (14 of 14)

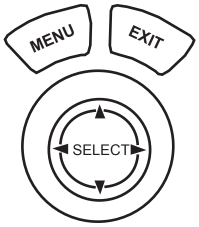
ADJUSTMENT MODE	ADJUSTMENT ITEM		ADJUSTMENT RANGE (HEX)	INITIAL DATA (HEX)	ADJUST VALUE (HEX)
PDP					
R-DRVH	Red Drive Gain Adjustment (HIGH)		FF	FF	
G-DRVH	Green Drive Gain Adjustment (HIGH)		FF	FF	
B-DRVH	Blue Drive Gain Adjustment (HIGH)		FF	FF	
R-DRVM	Red Drive Gain Adjustment (MED)		FF	FF	
G-DRVM	Green Drive Gain Adjustment (MED)		FF	FF	
B-DRVM	Blue Drive Gain Adjustment (MED)		FF	FF	
R-DRVL	Red Drive Gain Adjustment (STD)		FF	FF	
G-DRVL	Green Drive Gain Adjustment (STD)		FF	FF	
B-DRVL	Blue Drive Gain Adjustment (STD)		FF	FF	
GAMMA-D		TV/VID	02	01	
GAMMA-H		PC	02	01	
BURN-IN	Burn-In Mode		02	01	
APC	APC Control		01	00	
PDP-VER	PDP Microcomputer Version Display		03E7	--	
PDP-TM	PDP Panel Drive Time		FFFF	--	
CCFMD-D	NTSC/EBU Switch	TV/VID	01	00	
DDFME-H		PC	01	00	
CCFORMF		SDTV	01	00	
CCFORMG		HDTV	01	00	
CCFORMH		PC	01	00	
DCBONH	Tracking Adjustment Switch	TV/VID (Col. Temp.: High)	01	00	
DCBONML		TV/VID (Col. Temp.: Med/Std)	01	01	
DCBON-H		PC	01	01	
WBC	White Balance Correction		03	00	
HAPC	Heat APC Selection		01	00	
ETC					
POWSAVE	PC Power Save 0: Off 1: On		01	01	
POWS-TM	PC Power Save Timer (seconds)		FF	0F	
WIDEMOD	Wide Mode Display		07	--	
HDMODE8	1080I/1035I Select		01	00	
V CHIP					
SMPLING	Rating Detection Sampling Time T1=32xn ms		FF	00	
POLLING	Rating Detection Polling Counter		FF	0F	
START	Rating Block Start Counter		07	02	
TIMEOUT	Rating Block Release Timeout		1E	05	
STATUS	Rating Block Release Counter		07	02	
IR BLASTER					
IRDELAY	IR Start Delay Time		10	03	
IRREPT	IR Send Data Repeat Time		20	20	
HFREQ-N			0F	03	
INPUT 1	INPUT 1 Signal format setting		02	00	Note 1
INPUT 2	INPUT 2 Signal format setting		02	00	Note 1

BACK TO ADJUSTMENTS

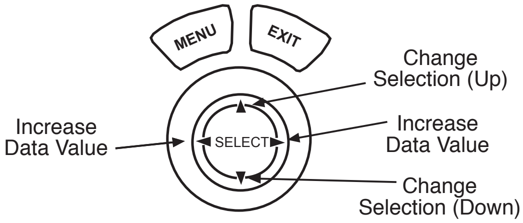
1-2. Changing Data and Selecting Adjustment Code

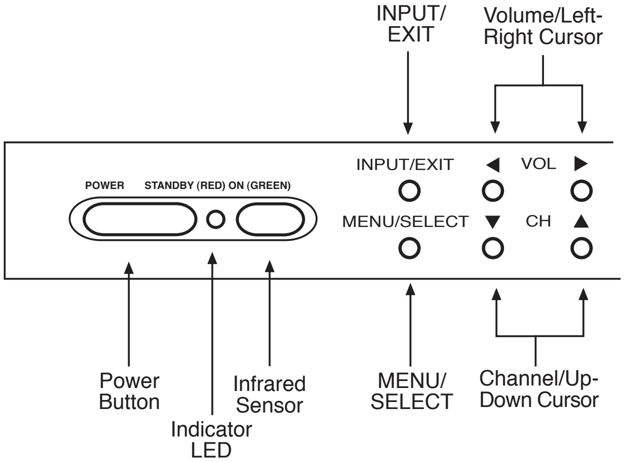
When the PDP set is in adjustment mode, the cursor ◀, ▶, ▲, ▼ and MENU keys of the remote control or front panel may be used as the adjustment keys.

A. Use any Hitachi remote control when making an adjustment.


MENU
EXIT
SELECT

▲, ▼ keys are used for selecting adjustment code.
◀, ▶ keys are used for changing data values.
MENU key is used to advance through the adjustment mode menus and pages.


MENU
EXIT
SELECT
Change Selection (Up)
Increase Data Value
Increase Data Value
Change Selection (Down)


INPUT/ EXIT
Volume/Left-Right Cursor
POWER
STANDBY (RED) ON (GREEN)
INPUT/EXIT
◀
VOL
▶
MENU/SELECT
▼
CH
▲
Power Button
Indicator LED
Infrared Sensor
MENU/ SELECT
Channel/Up-Down Cursor

B. To make a selection, use the CURSOR keys on the AVC front control panel or the Remote Control.

C. After finishing the necessary adjustment press the R/C EXIT key or EXIT key on the front panel.

Adjustment mode is released and PDP set returns to normal condition.

2. MEMORY INITIALIZE

2-1. MEMORY INITIALIZE OPERATION

NOTE: The execution of this function returns the adjustment codes to the initial values, therefore, **adjustment data will be lost**. We advise taking a note of all values or at least the data from adjustments that must be done (factory and service adjustments) before following the next procedures.

Procedure 1

There are two procedures for memory initialize, this is the first.

(1) Enter Adjustment mode by the method described in sub-items 1-1 and 1-2 from item I. "Adjustment procedure start up."
(2) Get to the second page of Adjust Mode by pressing remote control "Menu" key once, or with either the R/C or front panel ▲, ▼ cursor keys several times.
(3) Select MEMORY INIT adjust code.
(4) Activate MEMORY INIT by pressing ▶ cursor key for more than 3 seconds.
(5) Check that the receiving channel goes to CH03. Unit is set to factory settings and adjustment data changed to its inital values.

Procedure 2

This is the second procedure for executing memory initialize to the PDP set

(1) Remove the AVC20 case cover.
(2) With a metal tip, short the PRST connector on the AV P.W.B.
(3) Check that the set returns to delivery settings.

2-2. Factory and Service Adjustments

The adjustment items that are affected by the memory initialize operation are shown below:

ADJUST MODE	XXXX
SUB TINT	**
SUB CONTRAST(M)	0B
SUB CONTRAST(S)	0A
AFC/CLOCK TEST	☐
MEMORY INIT	☐
W/B INIT	☐
I2OPEN	☐
IR BLASTER	☐
BURN IN	**

AVERAGE VALUES

And under MSC Adjust item, the next parameters are also affected:

MSC>

M_BRT_4	53
M_BRT_A	53
M_BRT_H	4E

BACK TO ADJUSTMENTS

3.-Sub Contrast adjustment (AVC Center)

This adjustment is only necessary if picture contrast seems to be deficient, memory initialization was done without making a note of the settings, or if the IC I001(main micon) or I003 (EEPROM) were changed.

Adjustment codes to be used

SUB CONTRAST(M) **
Main picture sub-contrast adjustment code

SUB CONTRAST(S) **
Sub picture sub-contrast adjustment code

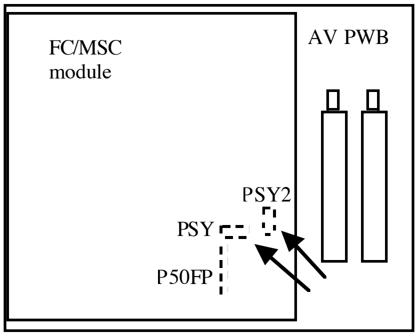
Adjustment signal to be used

RF input NTSC
100% White raster
100 IRE video level = 0.714Vdc
40 IRE sync level = -0.286Vdc
No setup voltage
Black level = 0Vdc

Adjustment equipment

40MHz minimum bandwidth Oscilloscope with probe

Adjustment point location

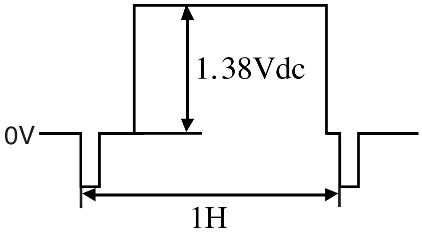


Adjustment preparation

1. Remove the 7 screws from the top cover case.
2. Turn on the TV set for at least 20 minutes before the adjusment.
3. After the 20 minutes heat-run, turn off the PDP TV set, remove the AVC20 top cover and turn the set back on by activating the adjustment mode (Check page 30). Press MENU key once after activating the Adjustment Mode to reach the sub-contrast codes.
4. Input the RF adjustment signal through antenna A (Recommended channels, VHF 03 or 04)
5. Connect the oscilloscope probe to the 5th pin if sub-picture adjustment, or 1st pin if main picture adjustment of PSY or PSY2 free connector terminals in the AV PWB. You can reach this adjustment points by entering the probe between the FC/MSC module and the U102 tuner unit.
6. Set SPLIT PIP mode with the remote control and receive the adjustment signal in both pictures, main and sub.

Adjustment procedure

1. Set the oscilloscope to display one horizontal period.
2. Adjust the amplitude of the signal with SUB CONTRAST(_) code value, to have 1.38Vdc between black level and white level.



BACK TO ADJUSTMENTS

4.- RGB Amplitude Adjustment (AVC Center)

Preparation

(1) Select "Video" - "Picture Mode" - "Sports" - "Reset". Set "Reset" of "Video" menu when PC input is selected.
(2) Confirm the 'Adjustment Item,' of the Table 2 to be at 'Initial Value'.
(3) Input 525p(480p) of RGB amplitude adj. signal into INPUT1(Component) input.
(4) Input 750p(720p) of RGB amplitude adj. signal into INPUT1(Component) input.
(5) Input VGA(60Hz) RGB amplitude adj. signal into RGB1 input.

Note: Perform pre heat-run for more than 30 min. before adjusting.

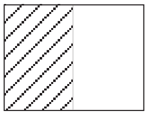
Adjustment

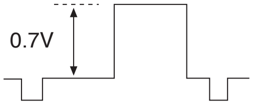
(1) Receive 525p(480p) signal, and set the Adjustment Mode menu items to the following values:
R/G/B BRIGHT = '5AH'
BRIGHT CENT = '50H'
FLAMAX = '27H'
(2) Select 'RGB(480p)' of Service Adj. menu. Press right cursor key (▶) over 2 seconds and have it perform automatic adjustment. When it's completed, 'Auto Adjusting' on the screen will disappear.
(3) Receive 750p(720p) signal, and set the Adjustment Mode menu items to the following values:
R/G/B BRIGHT = '5AH'
BRIGHT CENT = '50H'
FLAMAX = '27H'
(4) Similarly as (2), select 'RGB(720p)' of Service Adj. Menu. Press ▶ for 2 sec. to have it perform automatic adjustment.
(5) Receive PC signal (VGA(60Hz)), and set the Adjustment Mode Menu items to the following:
R/G/B BRIGHT = '5AH'
BRIGHT CENT = '50H'
FLAMAX = '3FH'
(6) Similarly as (2), select 'RGB(PC)' of Service Adj. Menu. Press ▶ for 2 sec. to do automatic adjustment.
(7) After these adjustments, change the 'ADJUST MODE' Menu items to the "Set Values" from table 2.

TABLE 2

SIGNAL	Adjustment Item	Initial Value	Set Value
480p	BRIGHT CENT.	50H	53H
720p	BRIGHT CENT.	50H	53H
VGA(60)	BRIGHT CENT.	50H	4EH

-Remarks
RGB amplitude adj. signal





Recommended Equipment:
ASTRO VG-823 Digital Video Generator
with RB-649 Remote Box.

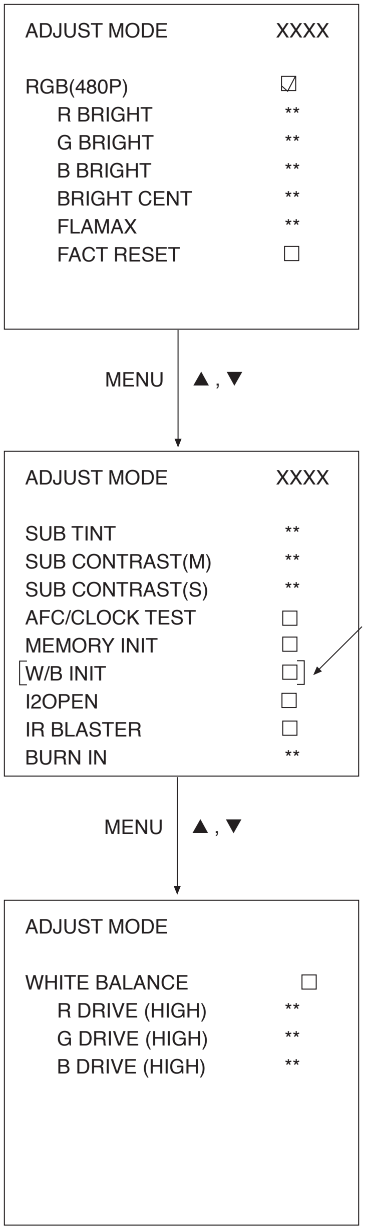
5.- White Balance Adjustments (PDP Monitor)

General Notes for White Balance

(1) If the incident illumination is more than 20 lux, change the environment (location, lighting, etc.) and ensure it to be less than 20 lux.
(2) At least one of the color drive codes must stay at its maximum value, FF_H.

Adjustment Codes to be Used

(1) Enter Adjustment Mode (see page 30).



ADJUST MODE XXXX

RGB(480P) ☑
R BRIGHT **
G BRIGHT **
B BRIGHT **
BRIGHT CENT **
FLAMAX **
FACT RESET ☐

ADJUST MODE XXXX

SUB TINT **
SUB CONTRAST(M) **
SUB CONTRAST(S) **
AFC/CLOCK TEST ☐
MEMORY INIT ☐
W/B INIT ☐
I2OPEN ☐
IR BLASTER ☐
BURN IN **

RESETS color drive codes to initial value, FF_H

ADJUST MODE

WHITE BALANCE ☐
R DRIVE (HIGH) **
G DRIVE (HIGH) **
B DRIVE (HIGH) **

White Balance Adjustment mode page. Check page 49 for details.

BACK TO ADJUSTMENTS

5-1. PC Color Temperature Adjustment

Preparation

(1) Make sure the PDP set has been turned on for more than 30 min.
(2) Input WINDOW signal (window ratio 6.25%) into RGB1 terminal at VGA (75Hz) 0.7V (No set-up).[NOTE 1]
(3) Set RESET in PC Mode Video menu of AVC20.
(4) Confirm that the Aspect Ratio is '16:9 Standard'.
(5) Turn off the set and turn it back on activating adjustment mode.
(6) Be sure to read general notes at the start of White Balance Adjustment.

Adjustment

(1) Perform the following adjustment with the remote control or front panel controls.
(2) Measure the center of the display area of the PDP panel with a CRT color analyzer.[NOTE 2]
(3) Ensure that Adjustment R/G/B DRIVE (****) are all set at 255_D(FF_H).

ADJUST MODE

WHITE BALANCE
R DRIVE (****) FF
G DRIVE (****) FF
B DRIVE (****) FF

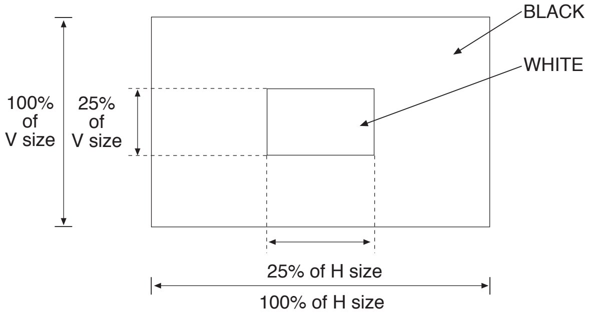
(4) After receiving the PC signal, lower the value of two of the color drive codes (or only one if enough) to adjust the Red, Green, or Blue drive levels in order to match the readouts from the color analyzer with the next values.

Color Temperature		Chroma Coordinates	
Level	(K)	x	y
HIGH	9300	0.285	0.294
MEDIUM	7500	0.301	0.314
STANDARD	6500	0.314	0.327

Where:
K: Kelvin
x,y: MPCD Chromaticity Chart coordinates.
±0.005 tolerance.

NOTES:

1 - PC W/B or color temperature Adjustment signal.



Recommended equipment: VG-823 Digital Video Generator.

2- Recommended Equipment: Minolta CRT color analyzer, Model No. CA-100.

5-2. Video Color Temperature Adjustment

Preparation

(1) Make sure the PDP set has been turned on for more than 30 min.
(2) Input FULL white raster composite signal into VIDEO 2 input terminal, with the next settings.
Video level: 0.714Vp-p
SYNC: 0.286Vp-p
Set-up level: 0V
(3) Under 'Video' menu, - 'Picture Mode' - 'Sports', press RESET to return video user controls to default settings.
(4) Activate adjustment mode by following 1-1 "How to get to adjustment mode" procedure.
(5) This adjustment should be done after PC color temperature adjustment.
(6) Be sure to read general notes at the start of white balance adjustment.

Adjustment

(1) Perform the following adjustment with the remote control or front panel controls.
(2) Measure the center of the display area of the PDP panel with a CRT color analyzer.[NOTE 2]
(3) Ensure that Adjustment R/G/B DRIVE(****) are all set as 255_D(FF_H).

ADJUST MODE

WHITE BALANCE
R DRIVE (****) FF
G DRIVE (****) FF
B DRIVE (****) FF

(4) After receiving the White Raster Video signal, lower the value of two of the color drive codes (or only one if enough) to adjust the Red, Green, or Blue drive levels in order to match the readouts from the color analyzer with the next values.

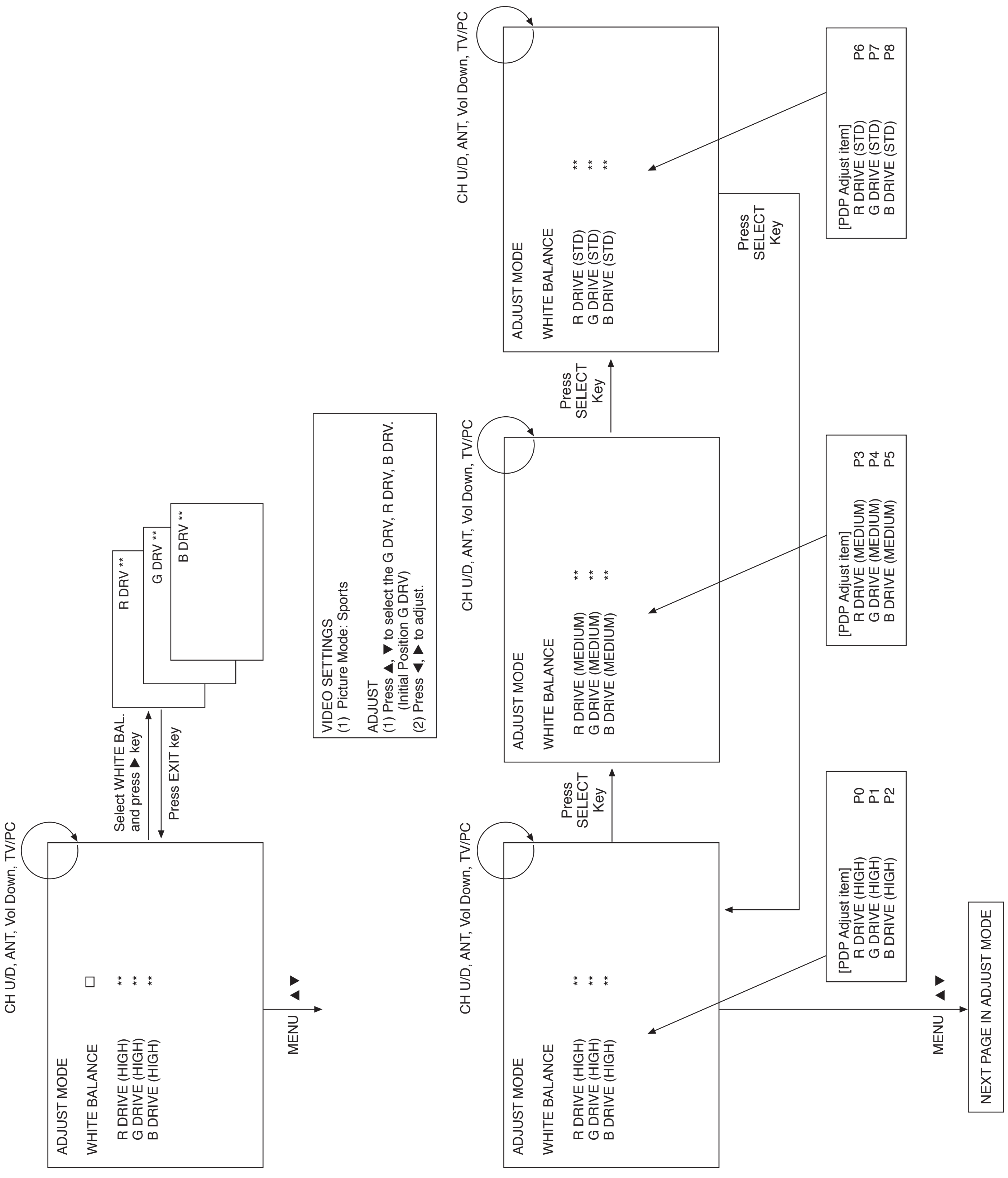
Color Temperature		Chroma Coordinates	
Level	(K)	x	y
HIGH	9300*	0.286	0.291
MEDIUM	7500	0.301	0.314
STANDARD	6500	0.314	0.327

* 32HDT20 - 9300K
42HDT20 - 9200K, x=0.285, y=0.298

Where:
K: Kelvin
x,y: MPCD Chromaticity Chart coordinates.
±0.005 tolerance.

BACK TO ADJUSTMENTS

WHITE BALANCE ADJUSTMENT OSD FLOW DIAGRAM


CH U/D, ANT, Vol Down, TV/PC
ADJUST MODE
WHITE BALANCE ☐
R DRIVE (HIGH) **
G DRIVE (HIGH) **
B DRIVE (HIGH) **
MENU ▲▼
Select WHITE BAL. and press ▶ key
Press EXIT key
R DRV **
G DRV **
B DRV **
VIDEO SETTINGS
(1) Picture Mode: Sports
ADJUST
(1) Press ▲, ▼ to select the G DRV, R DRV, B DRV.
(Initial Position G DRV)
(2) Press ◀, ▶ to adjust.
CH U/D, ANT, Vol Down, TV/PC
ADJUST MODE
WHITE BALANCE
R DRIVE (HIGH) **
G DRIVE (HIGH) **
B DRIVE (HIGH) **
Press SELECT Key
CH U/D, ANT, Vol Down, TV/PC
ADJUST MODE
WHITE BALANCE
R DRIVE (MEDIUM) **
G DRIVE (MEDIUM) **
B DRIVE (MEDIUM) **
Press SELECT Key
CH U/D, ANT, Vol Down, TV/PC
ADJUST MODE
WHITE BALANCE
R DRIVE (STD) **
G DRIVE (STD) **
B DRIVE (STD) **
Press SELECT Key
[PDP Adjust item]
R DRIVE (HIGH) P0
G DRIVE (HIGH) P1
B DRIVE (HIGH) P2
[PDP Adjust item]
R DRIVE (MEDIUM) P3
G DRIVE (MEDIUM) P4
B DRIVE (MEDIUM) P5
[PDP Adjust item]
R DRIVE (STD) P6
G DRIVE (STD) P7
B DRIVE (STD) P8
MENU ▲▼
NEXT PAGE IN ADJUST MODE

BACK TO ADJUSTMENTS

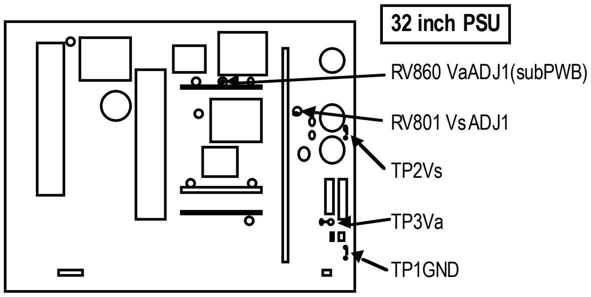
6. Vs, Va Voltage adjustment (PDP monitor)

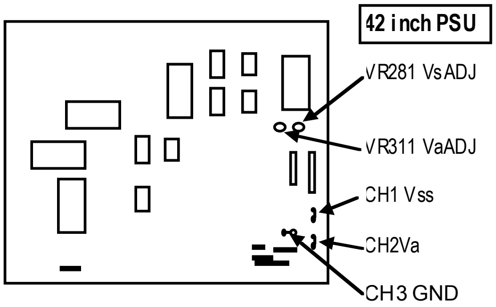
Vs: Sustain electrode voltage
Va: Address electrode voltage

This adjustment is only necessary when the PDP monitor PSU (Power Supply Unit) has been changed or repaired.

Adjustment equipment 1 DMM (Digital Multimeter) with a reading error of less than 0.02V

Adjustment points location





Adjustment preparation

1. The PDP TV set must be completely assembled except the PDP monitor backcover which must be removed.
2. Turn on the set and allow a warm-up of at least 20 minute receiving snow noise through antenna terminal A or B, channel does not matter.
3. Connect DMM leads to the Vs or Va adjustment points. It is adviced to use alligator clamp leads.
4. Select to display the VIDEO 1 input terminal but with no signal source attached to it (only black level).

Label position
32 inch PDP monitor: Upper left.
42 inch PDP monitor: Bottom left corner.

It is possible to find the label in a position different from this but, nevertheless, it should be highlighted and easy to find.

Adjustment procedure

1. Turn VsADJ1(RV801) or VsADJ(VR281) to adjust Vs voltage to be within ±0.1V of the value specified in the label on the inside of the panel.
2. Turn VaADJ1(RV860) or VaADJ(VR311) to adjust Va voltage to be within ±0.2V of the value specified in the label of the panel.
3. Reconfirm that the Vs voltage remains within ±0.1V of the value. Readjust if it's outside the margin.

NOTES: Label example:

<LOT>N6
Vs=80.0V Va=60.0V
Vw=140.0V Vx=60.0V

7. 1080i SYNC DETECTION SETTING

This plasma TV set is capable of displaying 1080i format images from an HDTV decoder STB (Set Top Box) receiver. But because of different coding schemes for HDTV sync signals, this may not be detected easily from some STB's.
The next setting procedure is available to make a correct display of the 1080i or 480p picture.

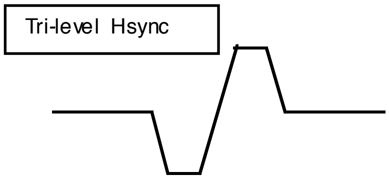
Adjustment codes to be used

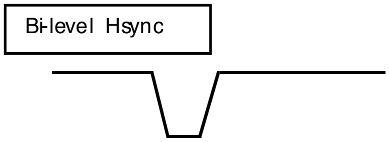
INPUT1 **
Input 1 signal format setting.

INPUT2 **
Input 2 signal format setting.

Adjustment signal to be used

A 1080i format signal from a commercial STB with bi-level horizontal sync pulses.





Adjustment preparation

1. Turn on the PDP TV set and connect the 1080i format bi-level Hsync signal through inputs 1 or 2 from the AVC rear panel.
2. Select to display the connected signal source; VIDEO 1 or VIDEO 2.
3. Confirm that the image is out of sync.

Adjustment procedure

1. After confirming the no-sync detection, select ANT A as the source signal to bee displayed, and turn off the PDP TV set.
2. Enter adjustment mode (Check page 30).
3. Press up cursor key once, to reach the IRBLASTER item, enter its sub menu and advance (downwards) through the 5 items to reach the INPUT1 or INPUT2 adjustment codes.
4. For VIDEO 1 input set INPUT1 code, for VIDEO 2 input set INPUT2 code.
5. Set the value of the corresponding code by following the next table

Input Code	Value	Function
INPUT 1 INPUT 2	00	Auto
	01	480p
	02	1080i

Where values
00 Sets auto-detection of sync frequencies.
01 Sets 480p as the sync frequencies.
02 Sets 1080i as the sync frequencies.

6. Once the sync frecuency has been set, press select from the remote control or front panel of AVC box and display VIDEO 1 input source.
7. Confirm the 1080i bi-level signal can be displayed correctly.
8. Leave adjustment mode by pressing EXIT key fom the remote control or AVC front panel.
9. Follow the same procedure for VIDEO 2 source and for the 480p sync frequency.

8. FACTORY RESET

After all of the adjustments of main chassis are finished, perform FACTORY RESET.

(1) Enter Adjustment Mode by the method described in sub-items 1-1 and 1-2 from item I. "Main Chassis Adjustment. Adjustment Procedure Start-up."
(2) From the first menu in Adjustment Mode, select FACT RESET adjustment code at the bottom row.
(3) Activate FACT RESET by pressing "Right" cursor key for more than 5 seconds.
(4) Check that the receiving channel goes to CH03. Unit is set to factory settings.
(5) This procedure returns user settings to the values and states shown in table 3 on the following pages.

BACK TO ADJUSTMENTS

TABLE 3
USER Control Initialize
Settings for delivery (FACTORY RESET)

Function	Initial Data/Condition	Check
NTSC Channel (Main, Sub)	03Channel	
Input Mode	Ant A	
Sleep timer	Not Registered	
A/V Net	Not Registered	
ASPECT	4:3 Standard	“NTSC” ANT A Air 03CH
Master Volume	20 Step	
Multi Window Mode		
PIP Mode	SPLIT	Main 03CH, Sub 03CH
Freeze Mode	SPLIT	Main 03CH, Sub 03CH
Video		
Picture Mode	Sports	
Contrast	100%	Picture Mode “Sports”
Brightness	50%	Picture Mode “Sports”
Color	50%	
Tint	Center	
Sharpness	50%	Picture Mode “Sports”
Vertical Position	Center (Gray Out)	
Color System		
YPBPR:1	Auto	
YPBPR:2	Auto	
Advanced Settings		
Color Temperature	High	Picture Mode “Sports”
Auto Contrast	Off	Picture Mode “Sports”
Noise Reduction	Off	Picture Mode “Sports”
Black Level Expansion	On	Picture Mode “Sports”
Black Side Panel	Off	
Audio		
Treble	50%	Picture Mode “Sports”
Bass	65%	Picture Mode “Sports”
Balance	Center	
Sound Enhancement		
TruBass	Medium	Picture Mode “Sports”
Surround		
Matrix Surround	Off	Picture Mode “Sports”
Advanced Settings		
Audio Source	Stereo	
Internal Speakers	On	
Auto Noise Cancel	Off	
Perfect Volume	Off	Picture Mode “Sports”
Ch. Manager		
ANT A	On: 2~13CH, Off:14~69CH	
ANT B	On: 2~13CH, Off:14~69CH	
Locks	Access Code Inital Value “0000”	
Change Access Code	Not Registered	
Engage Lock		
Set Channel Lock	Off	
Set Input Lock	Off	
Set Front Panel Lock	Off	
TV Time Lock	Not Registered	
Movie Ratings	Not Registered	

BACK TO ADJUSTMENTS

TABLE 3 (Continued)

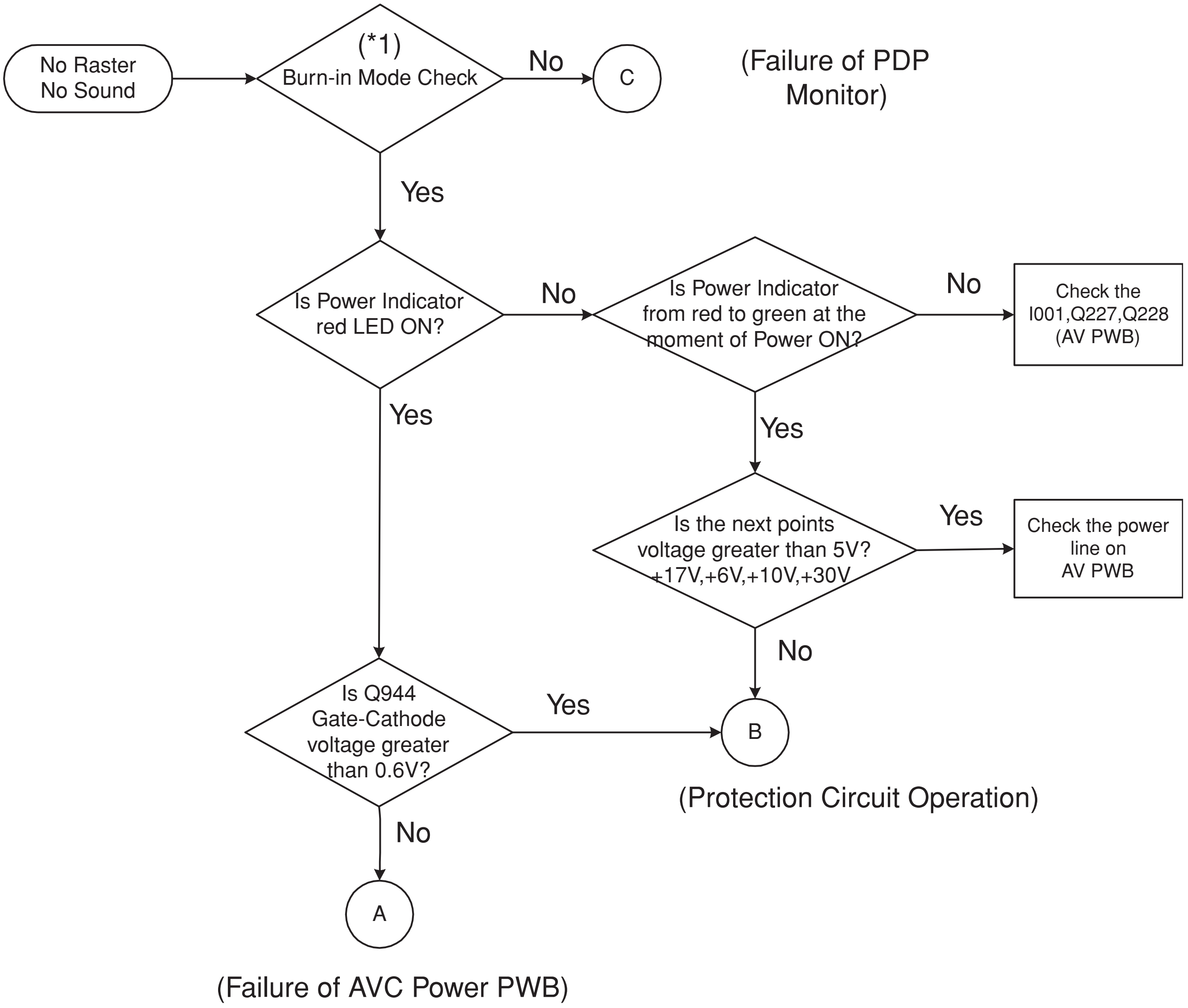
Function	Initial Data/Condition	Check
TV Ratings	Not Registered	
Canadian Ratings (Eng)	Not Registered	
Canadian Ratings (Frn)	Not Registered	
Setup		
Menu Preference		
Set The Language	English	
Set The Background	Shaded	
Screen Saver		
Main Picture Moving	Off	
Screen Wipe	Not Registered	
Set The Clock	Not Registered	
Channel Setup		
ANT A		
Source	Antenna	
Auto Channel Scan	Not Registered	
ANT B		
Source	Antenna	
Auto Channel Scan	Not Registered	
Set The Inputs		
Video 1 Rename	Reset	
Video 2 Rename	Reset	
Video 2 Auto Link	Off	
Video 3 Rename	Reset	
Video 4 Rename	Reset	
Video 5 Rename	Reset	
Video Power Save	Reset	
Power Save For Video Input	On	
Set Event Timer	Not Registered	
Set Closed Caption		
Caption Display	Off	
Captions		
Mode	Captions	
Channel	1	

PC MODE

Function	Initial Data/Condition	Check
VIDEO		
CONTRAST	100%	
BRIGHTNESS	50%	
COLOR TEMPERATURE	HIGH	
ENHANCER	OFF	
RESET	-	
BLACK SIDE PANEL	OFF	
SETUP		
AUTO ADJUST	-	
H POSITION	0	
V POSITION	0	
HORIZONTAL CLOCK	0	
CLOCK PHASE	0	
RESET	-	
RGB2 INPUT	MODE 1	
INPUT LEVEL	0.7V	

BACK TO ADJUSTMENTS

TROUBLESHOOTING FLOWCHARTS
(1 OF 5)


No Raster
No Sound
(*1)
Burn-in Mode Check
No
C
(Failure of PDP Monitor)
Yes
Is Power Indicator red LED ON?
No
Is Power Indicator from red to green at the moment of Power ON?
No
Check the I001,Q227,Q228 (AV PWB)
Yes
Yes
Is the next points voltage greater than 5V? +17V,+6V,+10V,+30V
Yes
Check the power line on AV PWB
No
Is Q944 Gate-Cathode voltage greater than 0.6V?
Yes
B
(Protection Circuit Operation)
No
A
(Failure of AVC Power PWB)

Note (*1) Disconnect cable between AVC and PDP, and press and hold 'Test Button' on rear of PDP for more than 5 seconds.

At the time, are some test patterns displayed?

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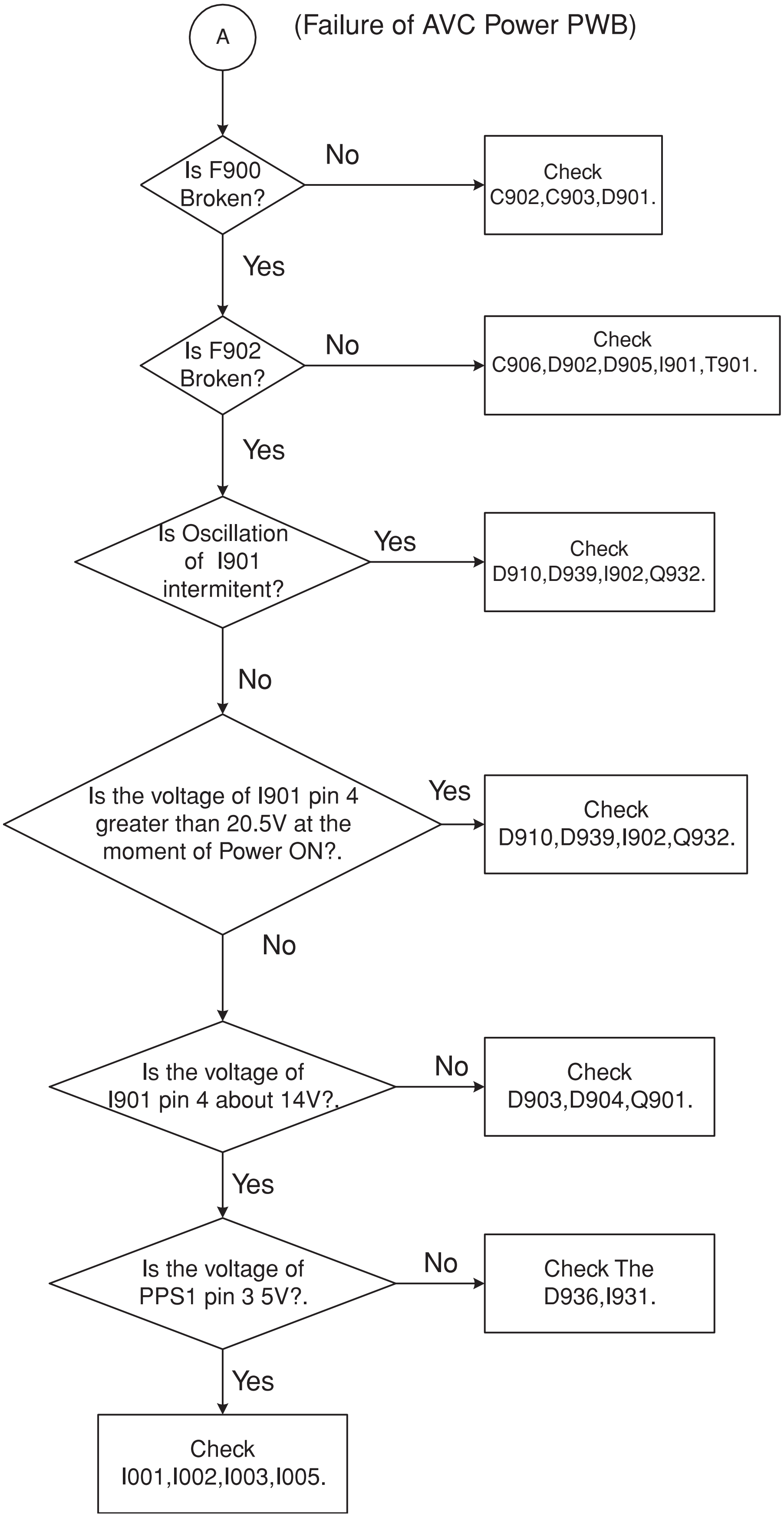
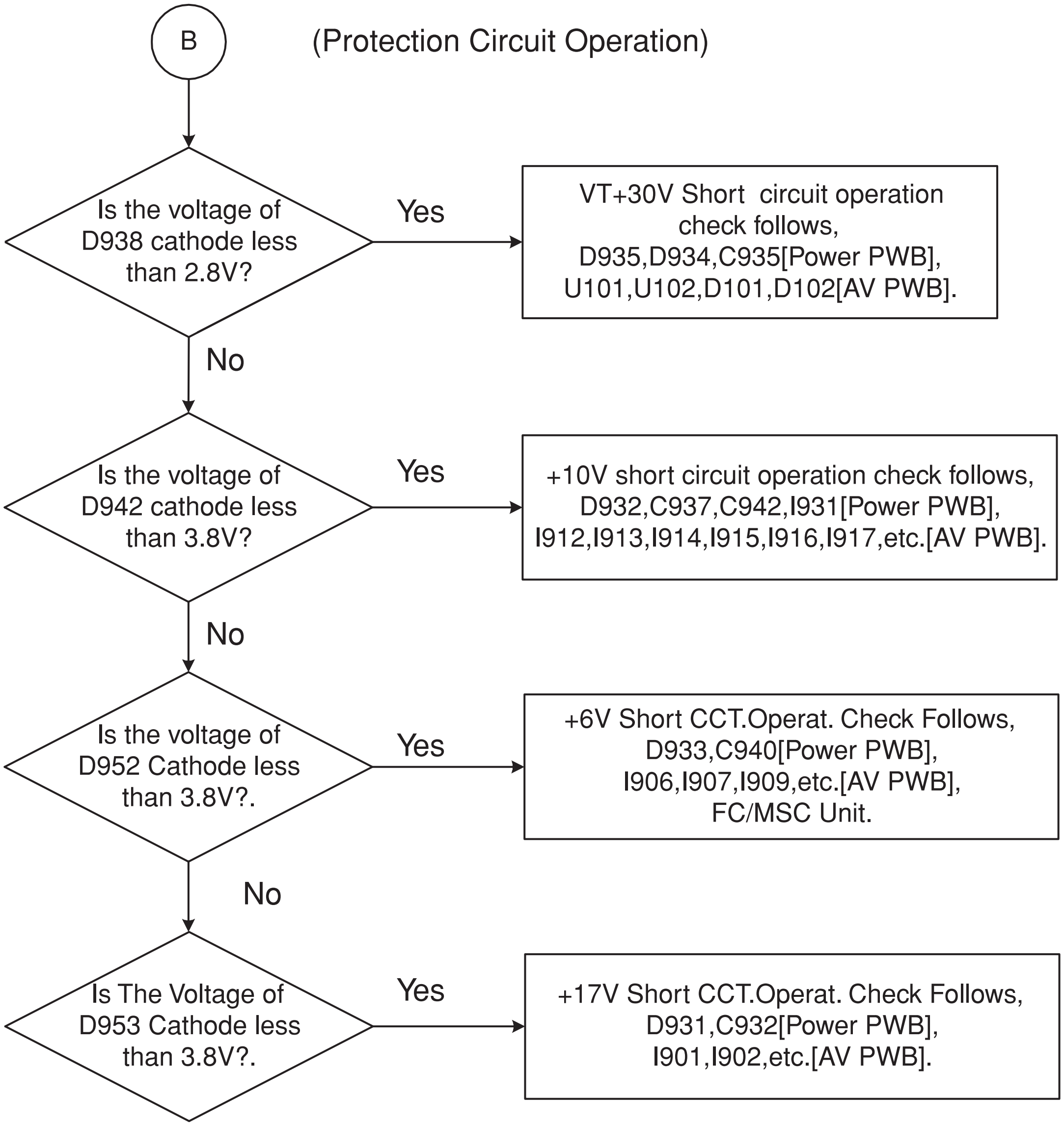
TROUBLESHOOTING FLOWCHARTS

(2 OF 5)


A
(Failure of AVC Power PWB)
Is F900 Broken?
No
Check C902,C903,D901.
Yes
Is F902 Broken?
No
Check C906,D902,D905,I901,T901.
Yes
Is Oscillation of I901 intermitent?
Yes
Check D910,D939,I902,Q932.
No
Is the voltage of I901 pin 4 greater than 20.5V at the moment of Power ON?.
Yes
Check D910,D939,I902,Q932.
No
Is the voltage of I901 pin 4 about 14V?.
No
Check D903,D904,Q901.
Yes
Is the voltage of PPS1 pin 3 5V?.
No
Check The D936,I931.
Yes
Check I001,I002,I003,I005.

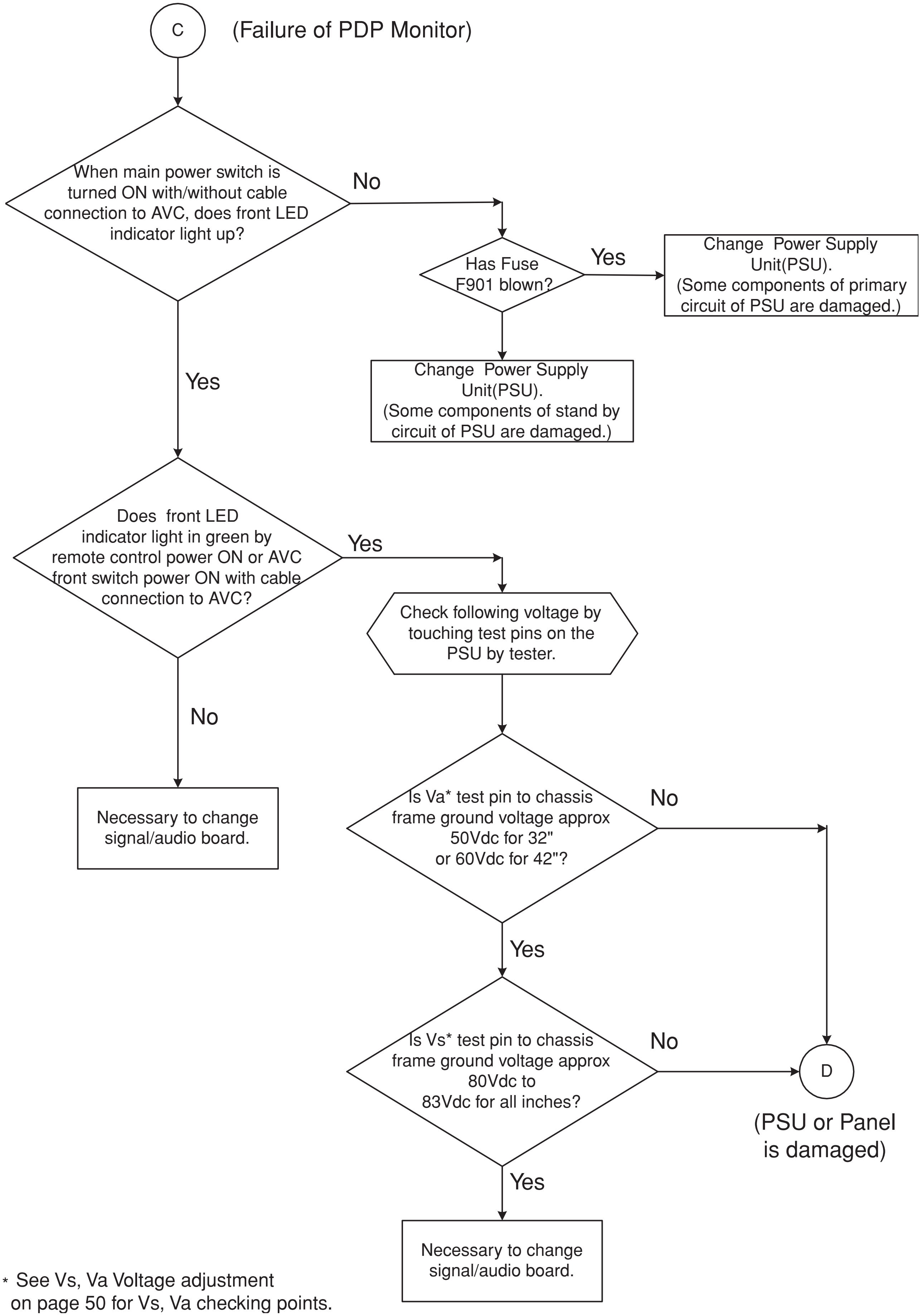
TROUBLESHOOTING FLOWCHARTS

(3 OF 5)


B
(Protection Circuit Operation)
Is the voltage of D938 cathode less than 2.8V?
Yes
VT+30V Short circuit operation check follows, D935,D934,C935[Power PWB], U101,U102,D101,D102[AV PWB].
No
Is the voltage of D942 cathode less than 3.8V?
Yes
+10V short circuit operation check follows, D932,C937,C942,I931[Power PWB], I912,I913,I914,I915,I916,I917,etc.[AV PWB].
No
Is the voltage of D952 Cathode less than 3.8V?.
Yes
+6V Short CCT.Operat. Check Follows, D933,C940[Power PWB], I906,I907,I909,etc.[AV PWB], FC/MSC Unit.
No
Is The Voltage of D953 Cathode less than 3.8V?.
Yes
+17V Short CCT.Operat. Check Follows, D931,C932[Power PWB], I901,I902,etc.[AV PWB].

TROUBLESHOOTING FLOWCHARTS

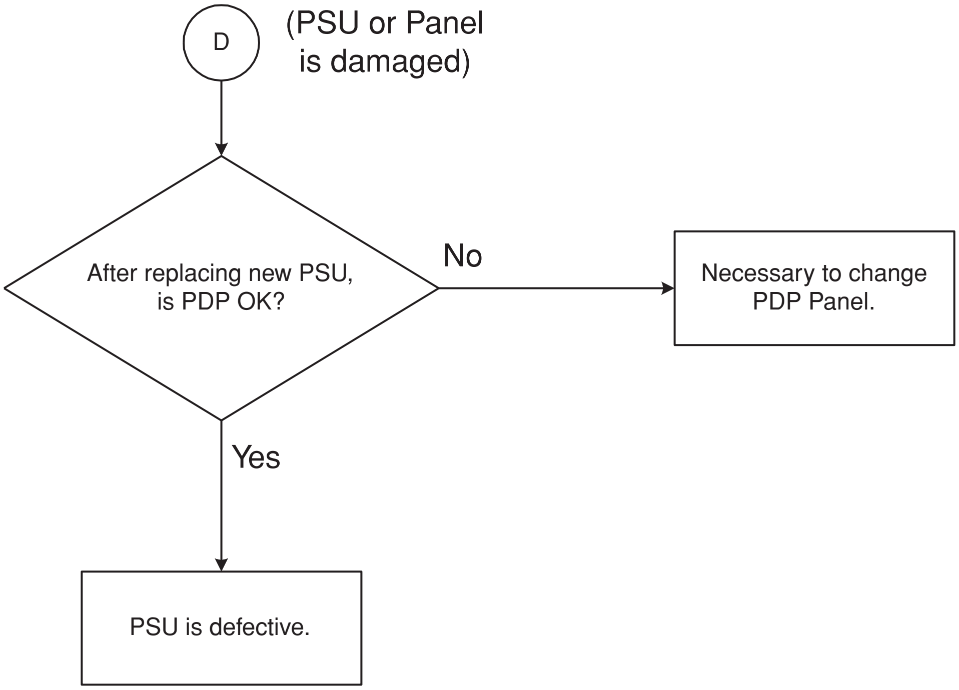
(4 OF 5)


C
(Failure of PDP Monitor)
When main power switch is turned ON with/without cable connection to AVC, does front LED indicator light up?
No
Has Fuse F901 blown?
Yes
Change Power Supply Unit(PSU). (Some components of primary circuit of PSU are damaged.)
Change Power Supply Unit(PSU). (Some components of stand by circuit of PSU are damaged.)
Yes
Does front LED indicator light in green by remote control power ON or AVC front switch power ON with cable connection to AVC?
Yes
Check following voltage by touching test pins on the PSU by tester.
No
Necessary to change signal/audio board.
Is Va* test pin to chassis frame ground voltage approx 50Vdc for 32" or 60Vdc for 42"?
No
Yes
Is Vs* test pin to chassis frame ground voltage approx 80Vdc to 83Vdc for all inches?
No
D
(PSU or Panel is damaged)
Yes
Necessary to change signal/audio board.

* See Vs, Va Voltage adjustment on page 50 for Vs, Va checking points.

TROUBLESHOOTING FLOWCHARTS

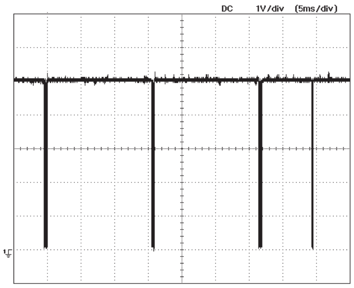
(5 OF 5)


D
(PSU or Panel
is damaged)
After replacing new PSU,
is PDP OK?
No
Necessary to change
PDP Panel.
Yes
PSU is defective.

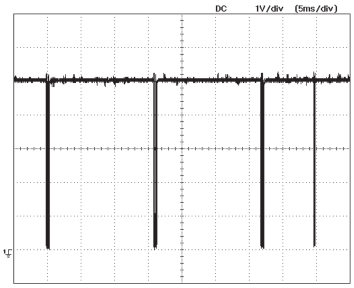
WAVEFORMS AT EACH SECTION

Numbers inside circle correspond to locations shown in the circuit diagram.

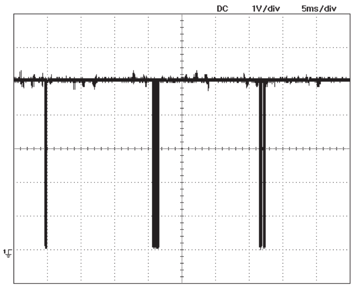
① I001 Pin 29



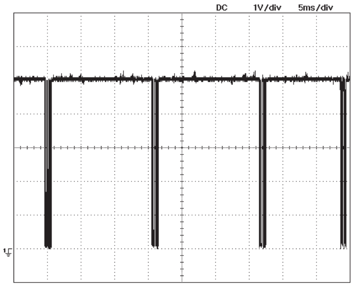
② I001 PIN 30



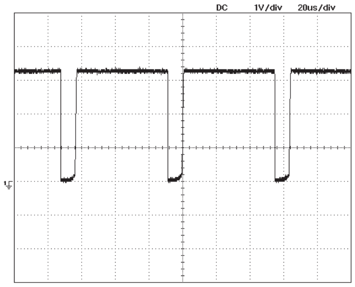
③ I001 PIN 28



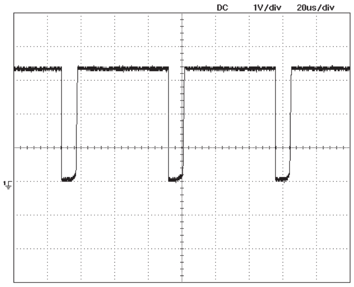
④ I001 PIN 31



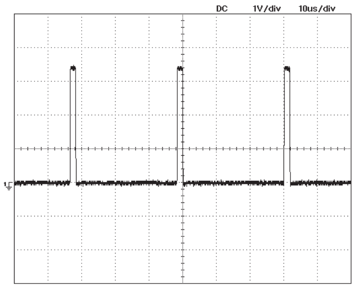
⑤ I001 PIN 23



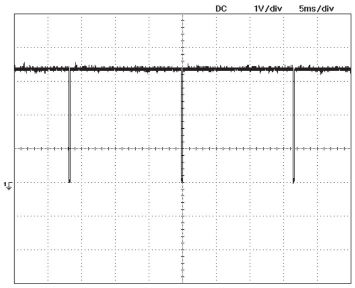
⑥ I001 PIN 25



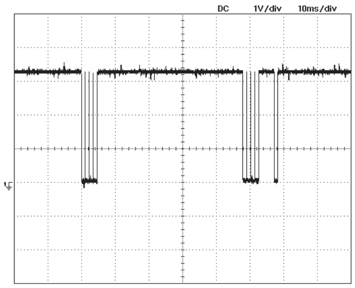
⑦ I001 PIN 62



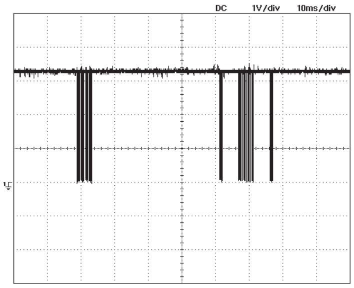
⑧ I001 PIN 64



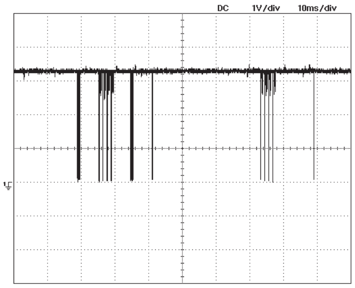
⑨ I001 PIN 56



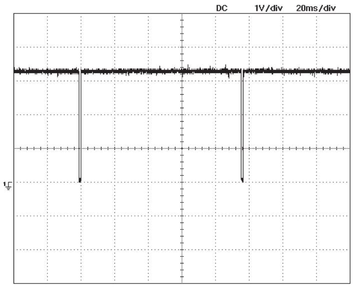
⑩ I001 PIN 53



⑪ I001 PIN 52



⑫ I001 PIN 55



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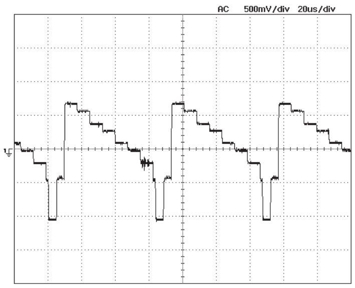
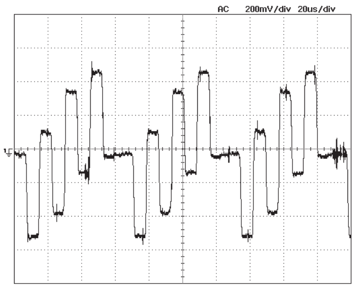
WAVEFORMS AT EACH SECTION

Numbers inside circle correspond to locations shown in the circuit diagram.

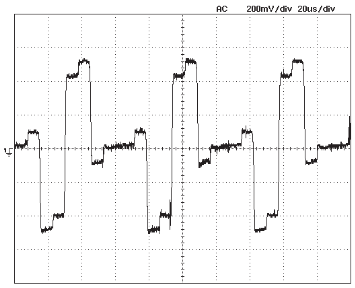
⑬ TP301 (PS0FP PIN 24)



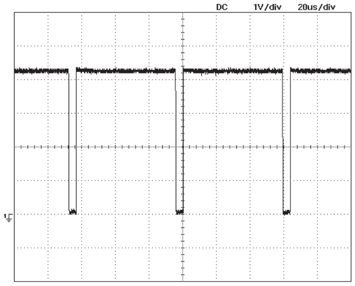
⑭ TP302 (P50FP PIN 23)



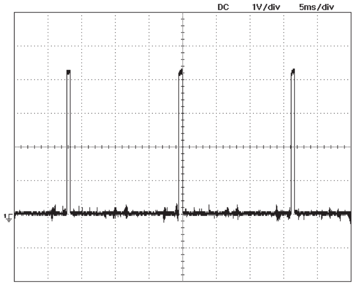
⑮ TP303 (P50FP PIN 22)



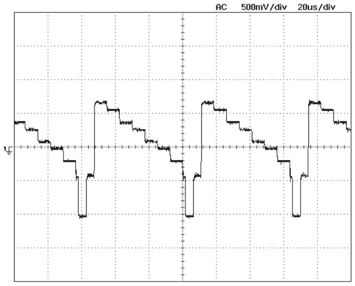
⑯ TP304 (P50FP PIN 20)



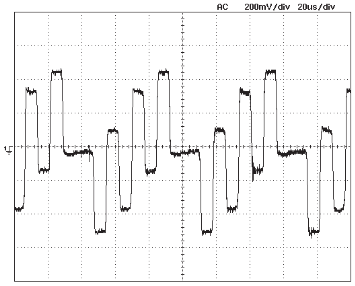
⑰ TP305(P50FP PIN 19)



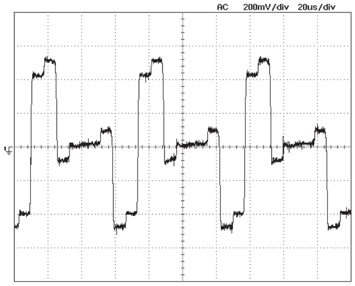
⑱ TP306 (P50FP PIN 17)



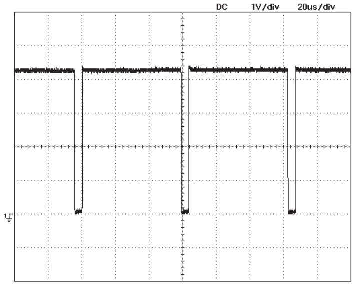
⑲ TP307 (P50FP PIN 16)



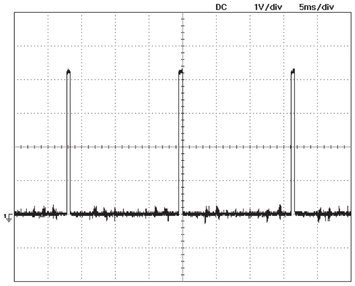
⑳ TP308 (P50FP PIN 15)



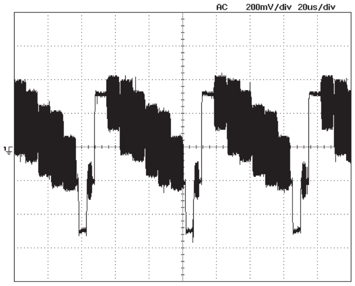
㉑ TP309 (P50FP PIN 13)



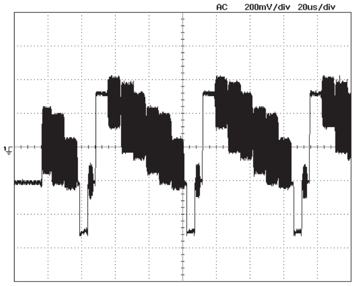
㉒ TP310 (P50FP PIN 12)



㉓ U102 PIN 18



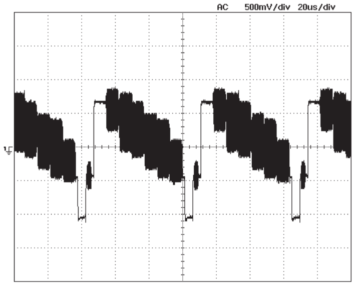
㉔ U101 PIN 18



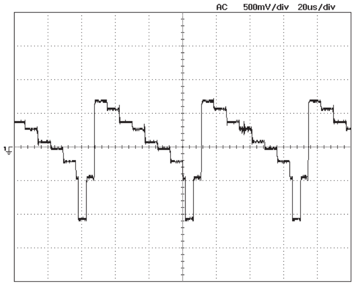
WAVEFORMS AT EACH SECTION

Numbers inside circle correspond to locations shown in the circuit diagram.

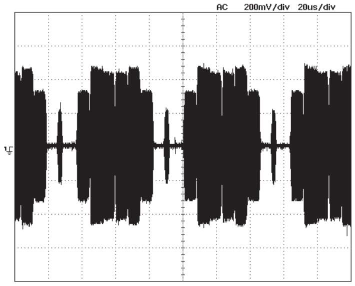
㉕ TPX51 (IX01 PIN 44)



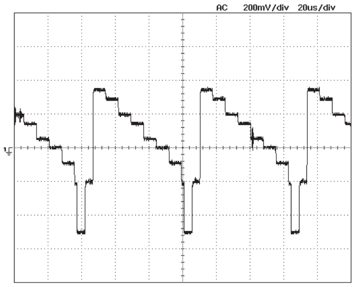
㉖ TPX54 (IX01 PIN 56)



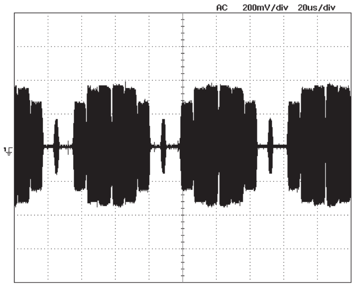
㉗ TPX55 (IX01 PIN 58)



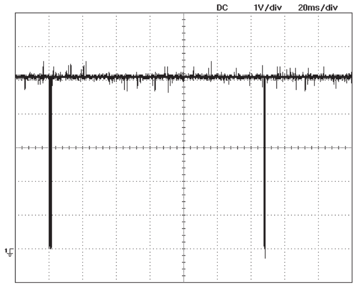
㉘ TPW03 (IW01 PIN 84, after LPF)



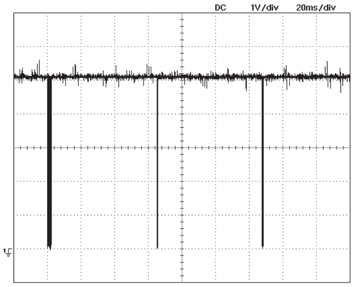
㉙ TPZ23 (IW01 PIN 83, after chroma)



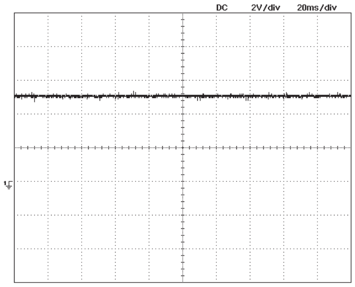
㉚ I008 PIN 54



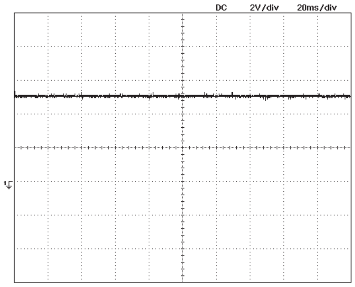
㉛ I008 PIN 55



㉜ I008 PIN 59



㉝ I008 PIN 58



DC VOLTAGE TABLES

AVC1-U AV BOARD

AVC1-U AV (Audio/Video) board

Symbol	Pin No.	DC Voltage
I001	1	0.2
	2	1.3
	3	5
	4	4.8
	5	0
	6	0
	7	1.7
	8	0
	9	0
	10	0
	11	0
	12	3.3
	13	1.7
	14	0
	15	1.7
	16	3.3
	17	-
	18	3.3
	19	0
	20	22.8
	21	0
	22	0
	23	2.8
	24	0
	25	2.8
	26	2
	27	23.8
	28	5
	29	5
	30	5
	31	5
	32	0
	33	0
	34	0
	35	0
	36	0
	37	3.3
	38	0
	39	3.3
	40	3.3
	41	0
	42	2.55
	43	0
	44	0
	45	0
	46	0
	47	3.3
	48	3.3
	49	30
	50	30
	51	3
	52	3.2
	53	3.2
	54	183.7
	55	3.2
	56	3.2
	57	3.2
	58	3.2
	59	3.1
	60	3.2
	61	0
	62	0.1
	63	0
	64	3.3
	65	0
	66	0
	67	0
	68	0
	69	0
	70	0
	71	0
	72	0
	73	3.2
	74	3.2
	75	3.2
	76	0
	77	3.8
	78	3.3
	79	3.3
	80	4.2
	81	3.3
	82	3.3
	83	30.8
	84	30.4
	85	3.2
	86	3.2
	87	0
	88	0
	89	0
	90	0
	91	0
	92	1.7
	93	1.7
	94	3.3
	95	0.2
	96	1.3
	97	1.9
	98	0
	99	5
	100	1.9
I002	1	-
	2	-
	3	0
	4	3.3
	5	3.3
I003	1	0
	2	0
	3	0
	4	0
	5	4.86
	6	4.89
	7	-
	8	5
I201	1	6.3
	2	5.2
	3	-
	4	-
	5	-
	6	0
	7	0
	8	0
	9	-
	10	0
	11	0
	12	5.2
	13	6.3
	14	5.2
	15	5.2
	16	9
I202	1	3.3
	2	3.3
	3	0
	4	3.3
	5	3.3
	6	0
	7	3.3
	8	-
	9	-
	10	0
	11	0
	12	3.3
	13	0
	14	0
	15	0
	16	0
	17	3.3
	18	3.3
	19	0
	20	0
	21	0
	22	0
	23	0
	24	3.3
	25	0
	26	0
	27	0
	28	0
	29	0
	30	3.2
	31	3.3
	32	3.3
	33	3.3
	34	3.3
	35	3.3
	36	3.3
	37	3.3
	38	0
	39	0
	40	0
	41	0
	42	0
	43	0
	44	0
I203	1	0
	2	0
	3	5
	4	0
	5	0
	6	5
	7	0
	8	0
	9	5
	10	0
	11	3.2
	12	0
	13	0
	14	5
	15	0
	16	0
	17	3.3
	18	0
	19	0
	20	5
I204	1	5
	2	5
	3	5
	4	5
	5	5
	6	0
	7	0
	8	0

BACK TO CONTENTS

DC VOLTAGE TABLES

AVC1-U AV BOARD (CONT.)

	9	5
	10	5
	11	5
	12	5
	13	5
	14	5
	15	5
	16	5
I206	1	0
	2	3.2
	3	5
	4	3.2
	5	4.64
	6	3.2
	7	5
	8	0
	9	5
	10	0
	11	2.9
	12	0
	13	3.2
	14	4.9
	15	4.8
	16	4.8
	17	3.2
	18	4.9
	19	0
	20	5
I207	1	0
	2	0.2
	3	5
	4	4.9
	5	0.2
	6	0
	7	4.7
	8	0
	9	0.1
	10	5
	11	5
	12	4.7
	13	0.1
	14	0
	15	5
	16	5
I401	1	4.4
	2	4.3
	3	4.4
	4	4.3
	5	4.3
	6	0
	7	0
	8	0
	9	0
	10	0
	11	4.3
	12	4.4
	13	4.4
	14	4.3
	15	4.3
	16	8.9
I402	1	4.5
	2	1.5
	3	4.5
	4	8.9
	5	4.5
	6	0
	7	0
	8	4.5

	9	1.9
	10	4.5
I403	1	0
	2	2.82
	3	5.11
	4	2.8
	5	0
	6	0
	7	2.9
	8	0
	9	5.7
	10	2.9
	11	-
	12	2
	13	2.8
	14	5.1
	15	2.8
	16	2.9
I901	1	18
	2	4.5
	3	0
	4	1.3
	5	8.3
I902	1	18
	2	4.1
	3	0
	4	3.3
	5	2.4
I906	1	6.7
	2	-
	3	6.7
	4	6.7
	5	0
	6	0
	7	2.5
	8	2.5
I907	1	6.7
	2	-
	3	6.7
	4	6.7
	5	0
	6	0
	7	5
	8	5
I909	1	6.7
	2	-
	3	6.7
	4	6.7
	5	0
	6	0
	7	5
	8	5
I911	1	5
	2	-
	3	5
	4	5
	5	0
	6	0
	7	3.3
	8	3.3
I912	1	3.5
	2	10.2
	3	0
	4	9
	5	-
I913	1	3.5
	2	10.2
	3	0

	4	9
	5	-
I914	1	3.6
	2	10.2
	3	0
	4	9
	5	-
I915	1	3.5
	2	10.2
	3	0
	4	9
	5	-
I916	1	3.5
	2	10.2
	3	0
	4	8.9
	5	-
I917	1	3.5
	2	10.2
	3	0
	4	9
	5	-
IV01	1	0
	2	2.2
	3	2.8
	4	2.4
	5	1.2
	6	0
	7	0
	8	5
	9	0
	10	2.3
	11	2.2
	12	3.3
	13	3.8
	14	1.4
	15	3.6
	16	5
IW01	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0
	8	0
	9	0
	10	0
	11	0
	12	0
	13	0
	14	0
	15	0
	16	0
	17	0
	18	0
	19	0
	20	0
	21	0
	22	0
	23	0
	24	0
	25	0
	26	0
	27	0
	28	0
	29	0
	30	0

DC VOLTAGE TABLES

AVC1-U AV BOARD (CONT.)

	31	2.4
	32	2.4
	33	0
	34	0
	35	0
	36	0
	37	0
	38	3.2
	39	0
	40	0
	41	0
	42	0
	43	0
	44	0
	45	2.3
	46	2.3
	47	11.2
	48	1.1
	49	0
	50	1.8
	51	0
	52	1.2
	53	2.4
	54	0
	55	0
	56	0
	57	3.3
	58	0
	59	4.8
	60	4.8
	61	0.1
	62	0.1
	63	0
	64	2.4
	65	0
	66	0
	67	0
	68	0
	69	0
	70	0
	71	0
	72	0
	73	0
	74	0
	75	0
	76	2.9
	77	0
	78	0
	79	0
	80	0
	81	2.4
	82	1
	83	1.3
	84	1.3
	85	1
	86	0
	87	0
	88	1
	89	0.6
	90	0.7
	91	1.2
	92	2.4
	93	2.4
	94	1.2
	95	0.7
	96	1.026
	97	0
	98	0

	99	0
	100	2.4
IW02	1	0
	2	0
	3	0
	4	3.2
	5	3.2
IX01	1	3.8
	2	4.4
	3	3.8
	4	4.4
	5	4.3
	6	0.1
	7	0
	8	3.8
	9	4.4
	10	3.8
	11	4.4
	12	4.3
	13	0.1
	14	4.8
	15	4.3
	16	4.4
	17	4.3
	18	4.4
	19	4.3
	20	0.1
	21	0
	22	3.8
	23	4.4
	24	3.8
	25	4.4
	26	4.33
	27	0.1
	28	4.8
	29	4.4
	30	3.8
	31	4.4
	32	0
	33	4.9
	34	4.8
	35	0
	36	0
	37	4.2
	38	4.4
	39	4.4
	40	4.4
	41	4.1
	42	9
	43	4.4
	44	4.3
	45	4.4
	46	4.4
	47	4.3
	48	0
	49	5
	50	4.4
	51	4.3
	52	4.4
	53	4.1
	54	4.4
	55	4.4
	56	4.3
	57	0
	58	4.2
	59	4.4
	60	4.3
	61	4.4

	62	4.4
	63	4.3
	64	4.4
IX02	1	1.1
	2	1
	3	1.2
	4	9
	5	5.2
	6	0
	7	4.9
	8	0
	9	5
	10	5
	11	1.2
	12	1
	13	1.1
	14	9
	15	5.2
	16	0
	17	5
	18	0
	19	5
	20	5
	21	1.2
	22	1
	23	1.2
	24	0
	25	0
	26	0
	27	4.8
	28	5
	29	0
	30	0
	31	0
	32	5
	33	0
	34	5
	35	0
	36	5
	37	0
	38	5
	39	9
	40	4.3
	41	0
	42	4.3
	43	0
	44	4.4
	45	9
	46	4.3
	47	0
	48	4.3
	49	0
	50	4.4
	51	9
	52	9
	53	5.2
	54	0
	55	5
	56	0
	57	5
	58	9
	59	5.2
	60	0
	61	5
	62	0
	63	5
	64	5
IZ01	1	9

DC VOLTAGE TABLES

AVC1-U AV BOARD (CONT.)

	2	2.4
	3	4
	4	2.4
	5	0
	6	1.9
	7	0
	8	4.9
	9	6.1
	10	4.9
	11	0
	12	9
	13	4.8
	14	4.8
	15	0
	16	2.4
	17	4.6
	18	0
	19	2.4
	20	2.3
	21	3.9
	22	3.5
	23	3.6
	24	3.8
	25	5
	26	3
	27	0
	28	2.2
	29	2.2
	30	2
IZ02	1	9
	2	2.4
	3	4.1
	4	2
	5	0
	6	2
	7	0
	8	4.9
	9	6.1
	10	4.9
	11	0
	12	0
	13	4.8
	14	4.8
	15	0
	16	2.4
	17	4.6
	18	0
	19	2.4
	20	2.3
	21	3.9
	22	3.5
	23	3.6
	24	3.8
	25	5
	26	2.9
	27	0
	28	2.2
	29	2.2
	30	2
Q001	E	0
	B	0
	C	-
Q101	E	0
	B	0.7
	C	0
Q102	E	0
	B	0.7
	C	0

Q103	E	0
	B	0.6
	C	0
Q104	E	0
	B	0
	C	3.4
Q105	E	0
	B	0.6
	C	0
Q202	E	0
	B	0.6
	C	0
Q203	E	0
	B	-1.7
	C	3.7
Q204	E	5
	B	4.5
	C	0
Q205	E	4.3
	B	4.9
	C	5
Q206	E	3.1
	B	2.5
	C	0
Q207	E	2.5
	B	3.1
	C	5
Q208	E	4.5
	B	5.1
	C	9
Q209	E	4.6
	B	5.2
	C	9
Q210	E	0
	B	0.7
	C	0
Q211	E	0
	B	0.7
	C	0
Q212	E	0.2
	B	0.4
	C	1.4
Q213	E	0
	B	0
	C	3.3
Q214	E	0
	B	0
	C	5
Q215	E	0
	B	0.1
	C	2.8
Q216	E	5.7
	B	5.9
	C	0.5
Q217	E	5.9
	B	5.2
	C	0
Q218	E	5.2
	B	4.9
	C	9
Q219	E	4.2
	B	3.6
	C	0
Q220	E	0
	B	0.1
	C	2.8
Q221	E	5.7
	B	5.8

	C	0.5
Q222	E	5.8
	B	5.2
	C	0
Q223	E	5.2
	B	5
	C	9
Q224	E	4
	B	3.4
	C	0
Q225	E	0
	B	0
	C	3.3
Q227	E	0
	B	0.7
	C	0
Q228	E	0
	B	0
	C	3.5
Q231	E	0
	B	0
	C	5
Q232	E	0
	B	0.7
	C	0
Q233	E	0
	B	0.3
	C	1
Q234	E	0
	B	0.7
	C	0
Q235	E	0
	B	0
	C	1
Q236	E	0
	B	0.7
	C	0
Q241	E	0
	B	0.6
	C	2.2
Q242	E	0
	B	0.6
	C	2.2
Q243	E	0.7
	B	0
	C	0
Q244	E	0.7
	B	0
	C	0
Q245	E	0.7
	B	0.3
	C	0
Q246	E	0.7
	B	0.8
	C	5
Q247	E	0
	B	0.6
	C	8
Q248	E	3.3
	B	3.2
	C	0
Q249	E	3.3
	B	3.2
	C	0
Q250	E	3.2
	B	3.3
	C	0
Q251	E	0

DC VOLTAGE TABLES

AVC1-U AV BOARD (CONT.)

	B	0.7
	C	0.2
Q252	E	0
	B	0.7
	C	0
Q253	E	0
	B	0
	C	5
Q254	E	0.2
	B	0.5
	C	1.6
Q401	E	9
	B	5
	C	4.3
Q401A	E	4.3
	B	5
	C	9
Q402	E	4.3
	B	5
	C	9
Q402A	E	4.3
	B	4.9
	C	9
Q403	E	4.3
	B	5
	C	9
Q403A	E	4.3
	B	5
	C	9
Q404	E	0
	B	0.6
	C	0
Q405	E	0
	B	0.6
	C	0
Q406	E	3.7
	B	4.4
	C	9
Q406A	E	3.7
	B	4.4
	C	9
Q407	E	0
	B	-0.4
	C	0.4
Q407A	E	0
	B	-0.4
	C	0.4
Q408	E	3.8
	B	4.5
	C	9
Q408A	E	3.8
	B	4.5
	C	9
Q409	E	0
	B	-0.5
	C	0.2
Q409A	E	0
	B	-0.5
	C	0.2
Q410	E	0
	B	0.7
	C	0
Q411	E	4
	B	4.5
	C	8.3
Q411A	E	4
	B	4.5
	C	8.3

Q412	E	9
	B	8.3
	C	4.7
Q412A	E	9
	B	8.3
	C	4.7
Q413	E	0.8
	B	0.2
	C	0
Q414	E	0
	B	0
	C	5.4
Q415	E	6
	B	6.7
	C	0
Q416	E	0
	B	0.7
	C	0
Q901	E	0
	B	0
	C	8.3
Q902	E	0
	B	0
	C	2.4
Q903	E	0
	B	0.6
	C	0
Q906	1	5
	2	5
	3	5
	4	0
	5	5
	6	5
	7	5
	8	5
Q907	E	0
	B	0.6
	C	0
QV01	E	3
	B	3.6
	C	9
QV02	E	2
	B	2.7
	C	8.3
QV03	E	9
	B	8.3
	C	4.6
QV04	E	4
	B	4.6
	C	9
QV05	E	3.2
	B	3.8
	C	9
QV06	E	2.1
	B	2.7
	C	8.3
QV07	E	9
	B	8.3
	C	5.5
QV08	E	4.8
	B	5.5
	C	9
QV09	E	6
	B	6.7
	C	9
QV10	E	3
	B	2.3
	C	0

QW01	E	4
	B	4.7
	C	9
QW02	E	2.3
	B	1.7
	C	0
QW03	E	2
	B	2.1
	C	9
QW04	E	2.7
	B	2
	C	0
QW05	E	2.7
	B	2
	C	0
QW06	E	2
	B	2.2
	C	3.1
QW07	E	3.3
	B	3.1
	C	0
QW08	E	0
	B	0
	C	3
QW09	E	1.9
	B	1.3
	C	0
QW10	E	1.2
	B	1.8
	C	8.3
QW11	E	9
	B	8.3
	C	2.7
QW12	E	2.1
	B	2.7
	C	9
QW13	E	2
	B	1.4
	C	0
QW14	E	1.2
	B	1.8
	C	8.3
QW15	E	9
	B	8.3
	C	6.2
QW17	E	2.5
	B	3.2
	C	9
QW18	E	3.8
	B	33.2
	C	0
QX01	E	0
	B	-0.3
	C	0.4
QX02	E	0
	B	-0.3
	C	0.41
QX03	E	3.5
	B	4
	C	9
QX04	E	3.7
	B	4.3
	C	9
QX05	E	3.5
	B	4.2
	C	9
QX08	E	0
	B	0.6

DC VOLTAGE TABLES

AVC1-U AV BOARD (CONT.)

	C	2.2
QX12	E	3.6
	B	4.2
	C	9
QX13	E	3.6
	B	4.2
	C	9
QX14	E	3.6
	B	4.3
	C	9
QX15	E	3.6
	B	4.2
	C	9
QX16	E	3.5
	B	4.2
	C	9
QX17	E	3.4
	B	4
	C	9
QX19	E	6.3
	B	6.9
	C	9
QX20	E	5
	B	5.4
	C	0
QX21	E	6.7
	B	7.3
	C	9
QX22	E	5
	B	5.4
	C	0
QX23	E	6.6
	B	7.3
	C	9
QX24	E	4.9
	B	4.3
	C	0
QX25	E	6.6
	B	7.3
	C	9
QX26	E	5
	B	4.3
	C	0
QX27	E	6.3
	B	6.9
	C	9
QX28	E	5
	B	4.4
	C	0
QX29	E	6.7
	B	7.3
	C	9
QX30	E	5
	B	4.4
	C	0
QX31	E	6.6
	B	7.3
	C	9
QX32	E	5
	B	4.3
	C	0
QX33	E	6.6
	B	7.3
	C	9
QX34	E	5
	B	4.3
	C	0
QX37	E	2.3

	B	1.7
	C	0
QX38	E	4.2
	B	3.5
	C	0
QZ01	E	4.5
	B	3.8
	C	0
QZ02	E	4.2
	B	3.6
	C	0
QZ03	E	4.2
	B	3.5
	C	0
QZ04	E	5.5
	B	6.2
	C	8.8
QZ05	E	3.6
	B	3.9
	C	8.8
QZ06	E	5.3
	B	6
	C	8.8
QZ07	E	0
	B	0
	C	5.9
QZ08	E	4.2
	B	3.5
	C	0
QZ09	E	4.2
	B	3.6
	C	0
QZ10	E	4.4
	B	3.8
	C	0
QZ11	E	3.5
	B	2.9
	C	0
QZ12	E	3.5
	B	2.9
	C	0
QZ13	E	3.5
	B	4.1
	C	8.8
QZ14	E	3.6
	B	3.9
	C	9
QZ15	E	5.3
	B	5.9
	C	8.8
QZ16	E	0
	B	0
	C	5.9
QZ17	E	3.5
	B	4.2
	C	9
QZ18	E	3.5
	B	4.2
	C	9
QZ19	E	3.8
	B	4.4
	C	8.8
QZ21	E	3.9
	B	4.6
	C	5
QZ22	E	3.9
	B	4.6
	C	4.8

QZ27	E	0
	B	0
	C	5
QZ28	E	0
	B	0
	C	5

DC VOLTAGE TABLES

AVC1-U CONTROL and SUPPLY BOARDS/PT2-E POWER FILTER BOARD

AVC1-U CONTROL BOARD

Symbol	Pin No.	DC Voltages
QM01	E	0
	B	3.2
	C	0
DM01	1	0
	2	0
	3	1.9
HM01	1	0
	2	5
	3	1.7

AVC1-U POWER SUPPLY BOARD

Symbol	Pin No.	DC Voltage
I901	1	1.7
	2	0
	3	221
	4	16.5
	5	0
I902	1	9.9
	2	8.9
	3	3
	4	17.5
I903	1	17.8
	2	17.8
	3	0
	4	17.4
I904	1	0
	2	0
	3	0
	4	2.4
I905	1	3.6
	2	4.4
	3	2
	4	4.8
I931	1	10.3
	2	5.3
	3	0
	4	5
	5	-
Q901	G	0
	A	16.5
	K	0
Q903	E	1.7
	B	2.4
	C	1.7
Q931	E	18
	B	17.2
	C	18
Q932	E	5.9
	B	6.5
	C	9
Q933	E	6.9
	B	6
	C	6.8
Q934	E	0
	B	0.7
	C	1
Q940	E	0
	B	0.6
	C	0
Q941	E	4.6
	B	4.6
	C	0
Q944	G	0
	A	17.7
	K	0

PT2-E POWER FILTER BOARD

Symbol	Pin No.	DC Voltage
I901	1	1.8
	2	0
	3	561
	4	14.3
	5	0
I902	1	11.8
	2	10.8
	3	14.3
	4	14.6
Q910	E	13.6
	B	14.3
	C	14.6
Q930	E	6.6
	B	6.6
	C	10.8

DC VOLTAGE TABLES

PT2-E SIGNAL/AUDIO BOARD

PT2-E SIG/AUDIO BOARD

Symbol	Pin No.	DC Voltage
I004	1	3.3
	2	3.3
	3	2.5
	4	2.5
	5	0
I006	1	0
	2	0
	3	0
	4	0
	5	5
	6	5
	7	0
	8	5
I007	1	0
	2	0
	3	0
	4	5
	5	5
I008	1	5
	2	2.2
	3	2.4
	4	4.8
	5	5
	6	5
	7	0
	8	5
	9	0
	10	5
	11	5
	12	0
	13	0
	14	-
	15	0
	16	0
	17	0
	18	5
	19	5
	20	5
	21	5
	22	0
	23	0
	24	3.3
	25	0.7
	26	3.3
	27	0
	28	0
	29	5
	30	5
	31	0
	32	4.7
	33	4
	34	0.7
	35	1.5
	36	4.7
	37	5
	38	0
	39	3.2
	40	0
	41	0
	42	0
	43	0
	44	-
	45	-
	46	-
	47	5
	48	5
	49	0
	50	0
	51	5
	52	5
	53	5
	54	5
	55	5
	56	0
	57	0
	58	5
	59	5
	60	5
	61	5
	62	5
	63	5
	64	5
	65	5
	66	5
	67	5
	68	5
	69	-
	70	5
	71	0
	72	0
	73	0
	74	-
	75	5
	76	-
	77	-
	78	5
	79	5
	80	0
I201	1	0
	2	5
	3	-
	4	5
	5	0
	6	5
	7	0
	8	1.3
	9	0
	10	0
	11	0
	12	1.6
	13	0
	14	3.3
	15	0
	16	3.3
	17	0
	18	3.3
	19	0
	20	3.3
I202	1	3.3
	2	0.9
	3	2.2
	4	-
	5	0
	6	-
	7	-
	8	0.9
	9	3.3
	10	0.9
	11	0.8
	12	1
	13	0
	14	2.4
	15	-
	16	0.9
	17	2.9
	18	0.9
	19	-
	20	2.4
	21	0
	22	0.9
	23	1.1
	24	2.4
	25	1.6
	26	3.3
	27	3.2
	28	3.3
	29	0
	30	1.8
	31	1.5
	32	3.3
	33	0
	34	3.3
	35	0
	36	0
	37	1.2
	38	1.3
	39	1.2
	40	1.2
	41	1.3
	42	1.1
	43	0
	44	3.3
	45	1.2
	46	1.2
	47	1.2
	48	1.2
	49	0
	50	0.9
	51	1.45
	52	1.9
	53	0
	54	1.1
	55	1.1
	56	1.1
I603	1	7.4
	2	9.8
	3	2.4
	4	5
	5	-4.3
	6	-9.3
	7	-9.3
	8	0
	9	5
	10	4.3
	11	5
	12	5
	13	-7.3
	14	-8
	15	0
	16	5
IC401	1	6
	2	0
	3	0
	4	6
	5	6
	6	6
	7	6
	8	6
	9	0.7
	10	6
	11	1.2

DC VOLTAGE TABLES

PT2-E SIGNAL/AUDIO BOARD (CONT.)

	12	1.2
	13	5
	14	5
	15	0
	16	12
	17	5
	18	5
	19	1.4
	20	1.4
	21	6
	22	6
	23	6
	24	6
	25	6
	26	6
	27	6
	28	-
	29	-
	30	6
IC402	1	6
	2	6
	3	6
	4	6
	5	6
	6	6
	7	6
	8	6
	9	6
	10	6
	11	6
	12	6
	13	0
	14	0
	15	0
	16	12
	17	6
	18	6
	19	0
	20	12
	21	12
	22	6
	23	6
	24	6
	25	6
	26	6
	27	6
	28	6
	29	6
	30	6
IC403	1	6
	2	6
	3	6
	4	6
	5	6
	6	0
	7	0
	8	0
	9	5
	10	5
	11	-
	12	-
	13	-
	14	-
	15	-
	16	7.5
IC404	1	0
	2	5
	3	0
	4	1.1
	5	0
	6	4.2
	7	0
	8	5
	9	2.5
	10	2.5
	11	0
	12	2.5
	13	2.5
	14	2.5
	15	-
	16	0
	17	0
	18	0
	19	0
	20	0
	21	7.8
	22	12
	23	7.8
	24	7.8
	25	12
	26	7.8
	27	12
	28	0
	29	20
	30	5
	31	15
	32	6
IP02	1	14
	2	3.3
	3	0
	4	1.2
	5	13.6
Q002	E	5
	B	5
	C	-
Q003	E	5
	B	4.4
	C	5
Q004	E	0
	B	0.7
	C	0
Q007	E	4
	B	3.3
	C	0
Q008	E	0.7
	B	0
	C	0
Q009	E	1.5
	B	0.9
	C	0
Q201	E	0
	B	0.7
	C	0
Q202	GND	0
	IN	0
	OUT	0.7
Q203	E	5
	B	3
	C	3
Q204	E	5
	B	3
	C	3
Q401	E	0
	B	0.7
	C	0.8
Q402	E	0.6
	B	1.2
	C	0.7
Q403	GND	0
	IN	0
	OUT	1.2
Q404	GND	0
	IN	0
	OUT	0
Q405	GND	0
	IN	0
	OUT	0
Q406	GND	0
	IN	5
	OUT	0
Q407	GND	0
	IN	0
	OUT	0
QA01	GND	0
	IN	3.3
	OUT	0
QA02	E	0
	B	0
	C	5

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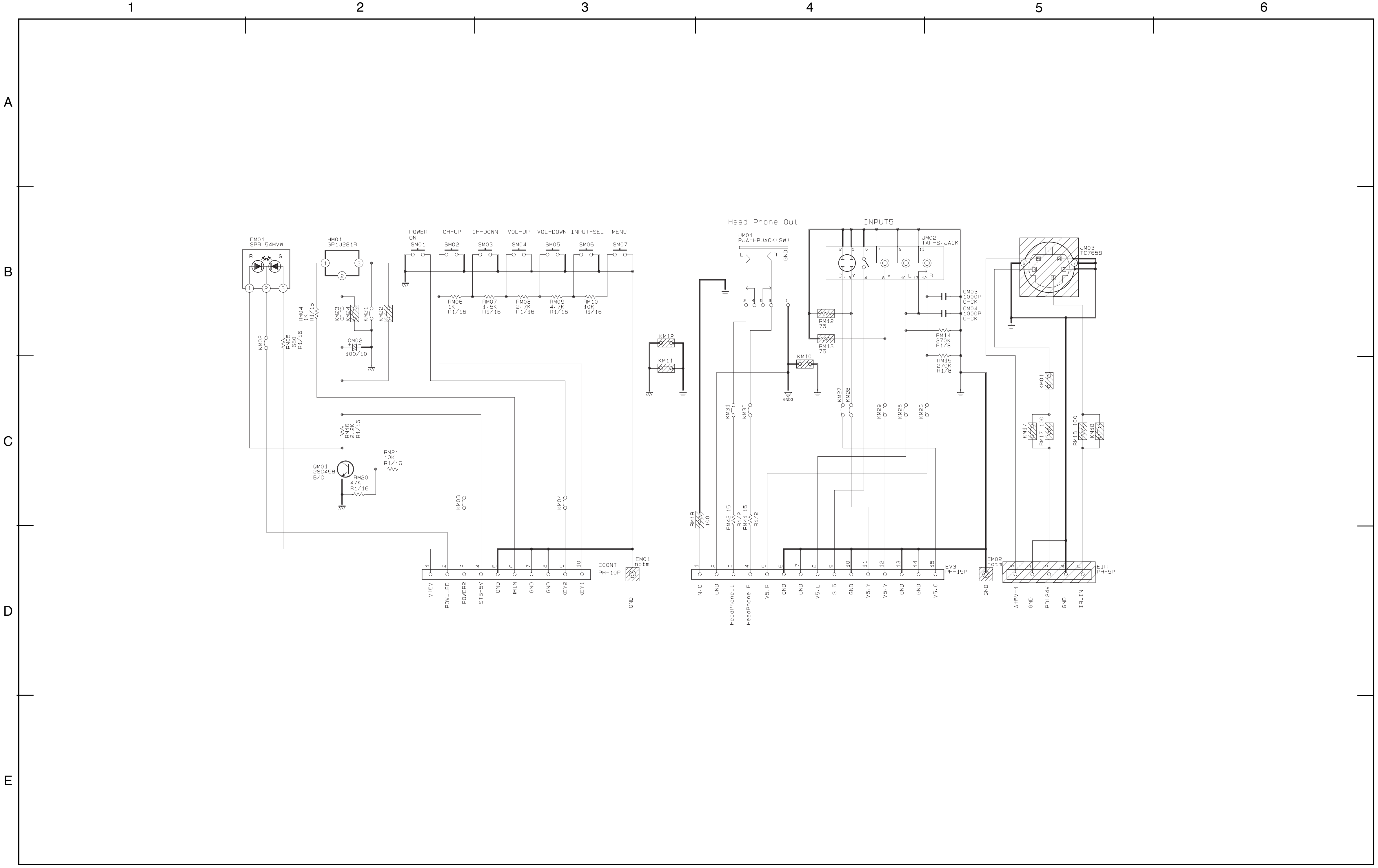
BASIC CIRCUIT DIAGRAM


1
2
3
4
5
6
A
B
C
D
E
DM01
SPR-54MVW
R
G
HM01
GP1U281R
POWER ON
CH-UP
CH-DOWN
VOL-UP
VOL-DOWN
INPUT-SEL
MENU
SM01
SM02
SM03
SM04
SM05
SM06
SM07
RM06 1K R1/16
RM07 1.5K R1/16
RM08 2.7K R1/16
RM09 4.7K R1/16
RM10 10K R1/16
RM04 1K R1/16
KM23
KM24
KM21
KM22
CM02 100/10
KM02
RM05 680 R1/16
RM16 2.2K R1/16
RM21 10K R1/16
QM01 2SC458 B/C
RM20 47K R1/16
KM03
KM04
KM12
KM11
ECONT PH-10P
EM01 notm
V+5V
POW_LED
POWER2
STB+5V
GND
RMIN
GND
GND
KEY2
KEY1
GND
Head Phone Out
JM01 PJA-HPJACK(SW)
L
R
GND
GND3
INPUT5
JM02 TAP-S.JACK
C
Y
V
L
R
RM12 75
RM13 75
KM10
CM03 1000P C-CK
CM04 1000P C-CK
RM14 270K R1/8
RM15 270K R1/8
KM31
KM30
KM27
KM28
KM29
KM25
KM26
RM19 100
RM42 15 R1/2
RM41 15 R1/2
EV3 PH-15P
N.C
GND
HeadPhone_l
HeadPhone_R
V5.R
GND
GND
V5.L
S-5
GND
V5.Y
V5.V
GND
GND
V5.C
EM02 notm
GND
JM03 TC7658
KM01
KM17
RM17 100
RM18 100
KM18
EIR PH-5P
A+5V-1
GND
PD+24V
GND
IR_IN

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

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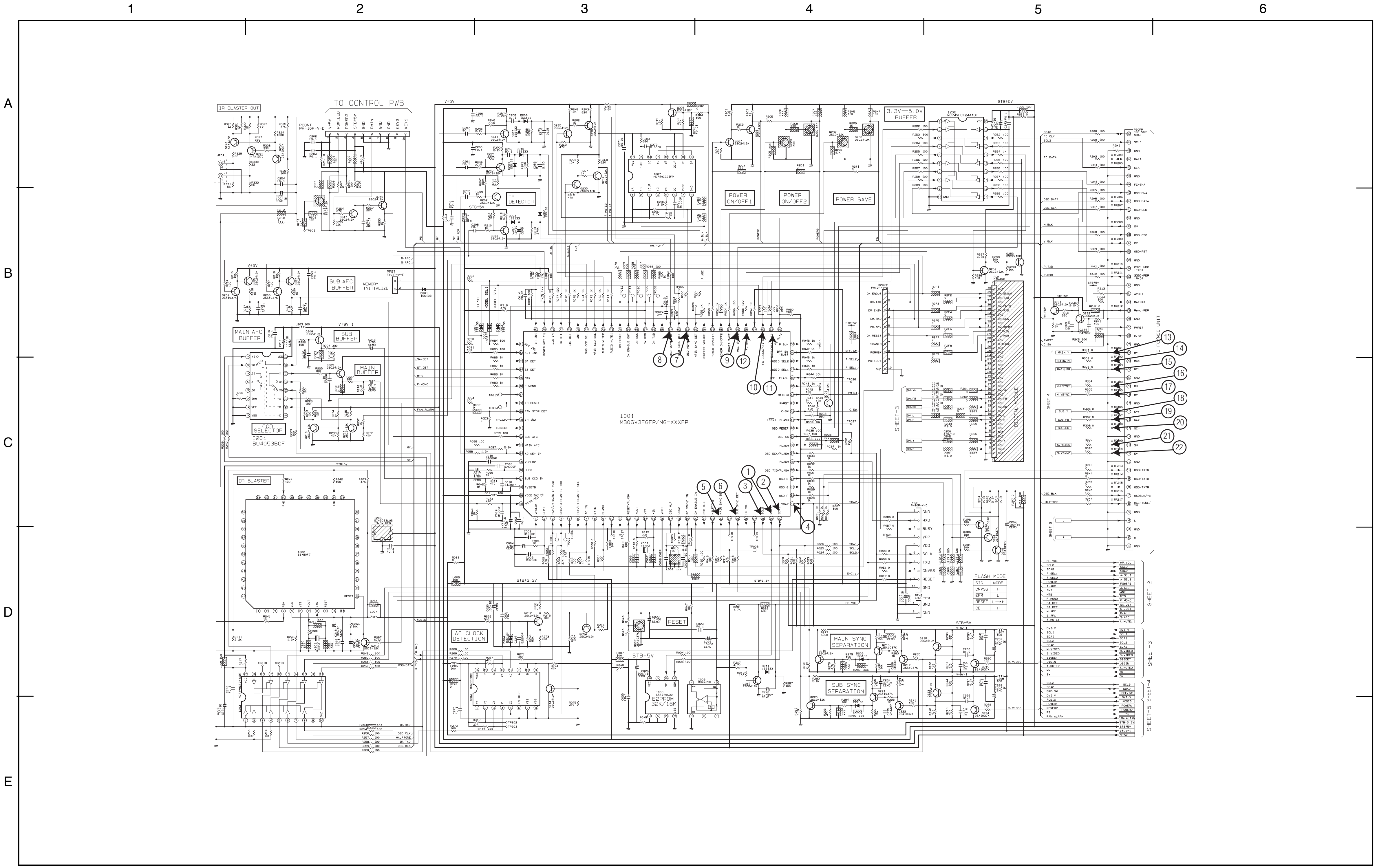
BASIC CIRCUIT DIAGRAM


1
2
3
4
5
6
A
B
C
D
E
IR BLASTER OUT
TO CONTROL PWB
IR DETECTOR
POWER ON/OFF1
POWER ON/OFF2
POWER SAVE
3.3V→5.0V BUFFER
SUB AFC BUFFER
MEMORY INITIALIZE
MAIN AFC BUFFER
SUB BUFFER
MAIN BUFFER
CCD SELECTOR
I201 BU4053BCF
IR BLASTER
I001 M306V3FGFP/MG-XXXFP
AC CLOCK DETECTION
RESET
STB+5V
E2PROM 32K/16K
MAIN SYNC SEPARATION
SUB SYNC SEPARATION
FLASH MODE
SHEET-2
SHEET-3
SHEET-4
SHEET-5
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
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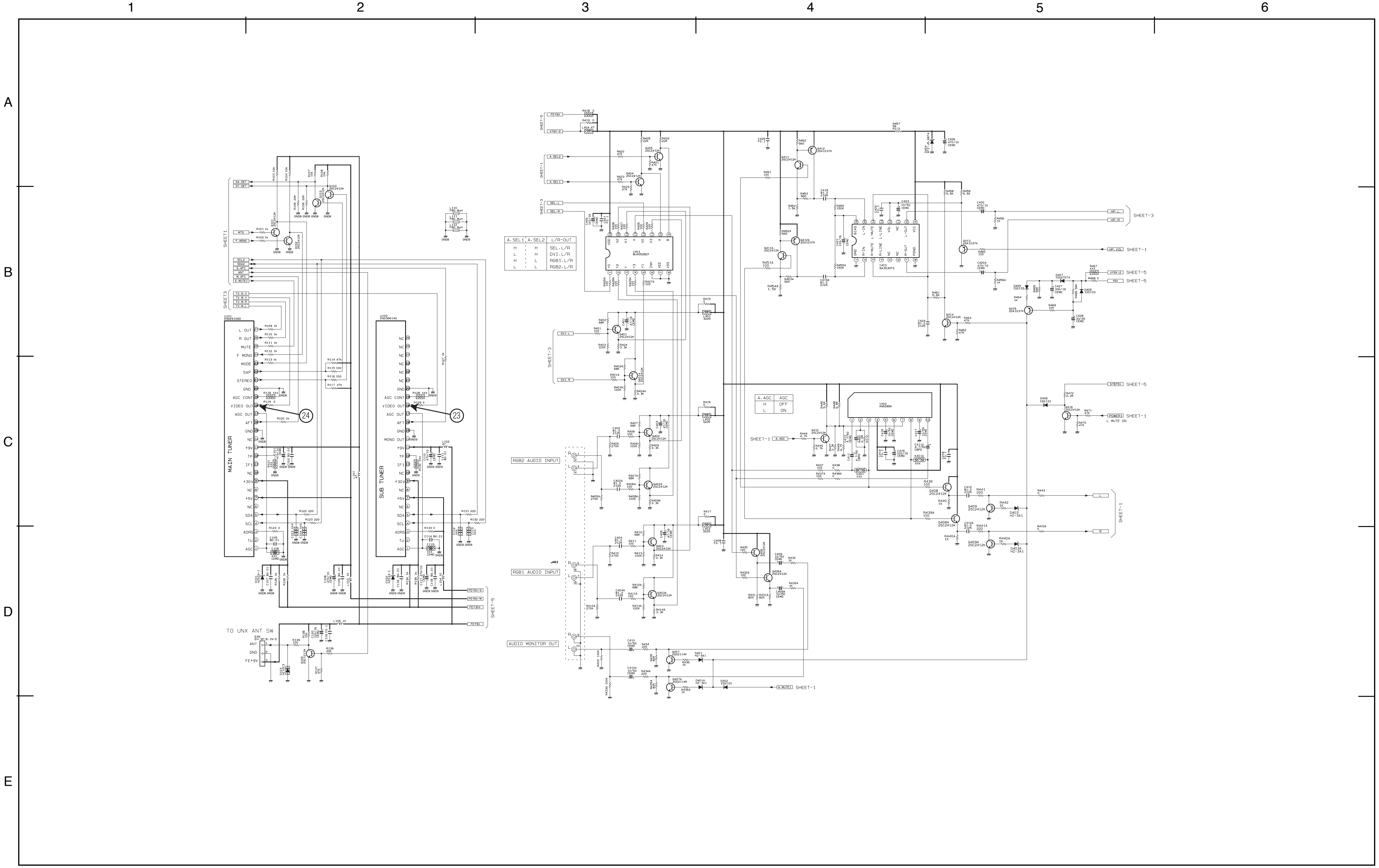
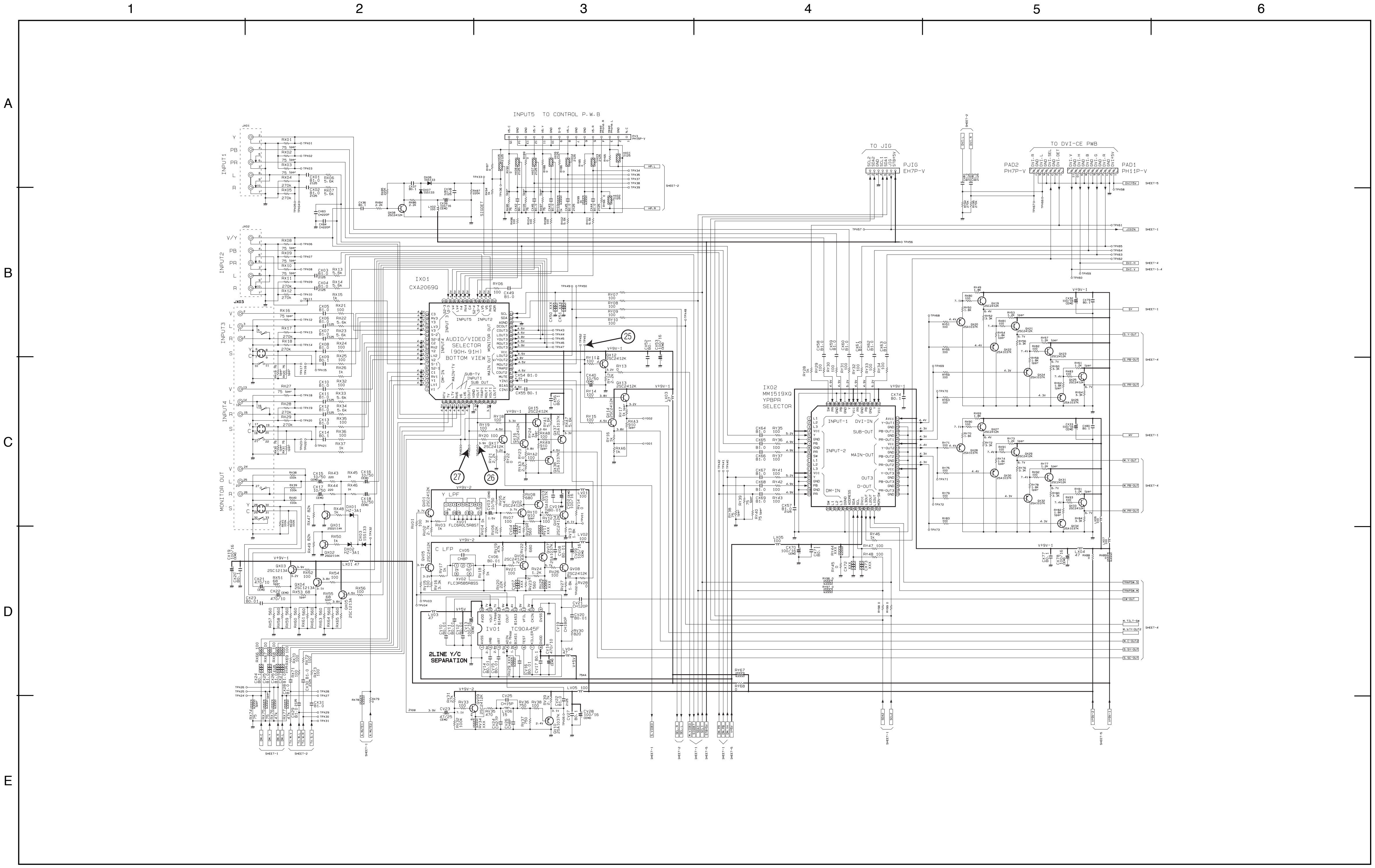
BASIC CIRCUIT DIAGRAM


1
2
3
4
5
6
A
B
C
D
E
MAIN TUNER
SUB TUNER
TO UNX ANT SW
RGB2 AUDIO INPUT
RGB1 AUDIO INPUT
AUDIO MONITOR OUT
SHEET-1
SHEET-3
SHEET-5
24
23
A.SEL1 | A.SEL2 | L/R-OUT
H | H | SEL.L/R
L | H | DVI.L/R
H | L | RGB1.L/R
L | L | RGB2.L/R
A.AGC | AGC
H | OFF
L | ON
SHEET-1 A.AGC
L MUTE ON

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

BASIC CIRCUIT DIAGRAM


1
2
3
4
5
6
A
B
C
D
E
INPUT5 TO CONTROL P.W.B
TO JIG
TO DVI-CE PWB
INPUT1
INPUT2
INPUT3
INPUT4
MONITOR OUT
IX01
CXA2069Q
AUDIO/VIDEO SELECTOR (SOH-91H) BOTTOM VIEW
IX02
MM1519XQ
YPBPR SELECTOR
Y LPF
C LPF
IV01
TC90A45F
2LINE Y/C SEPARATION
25
26
27

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

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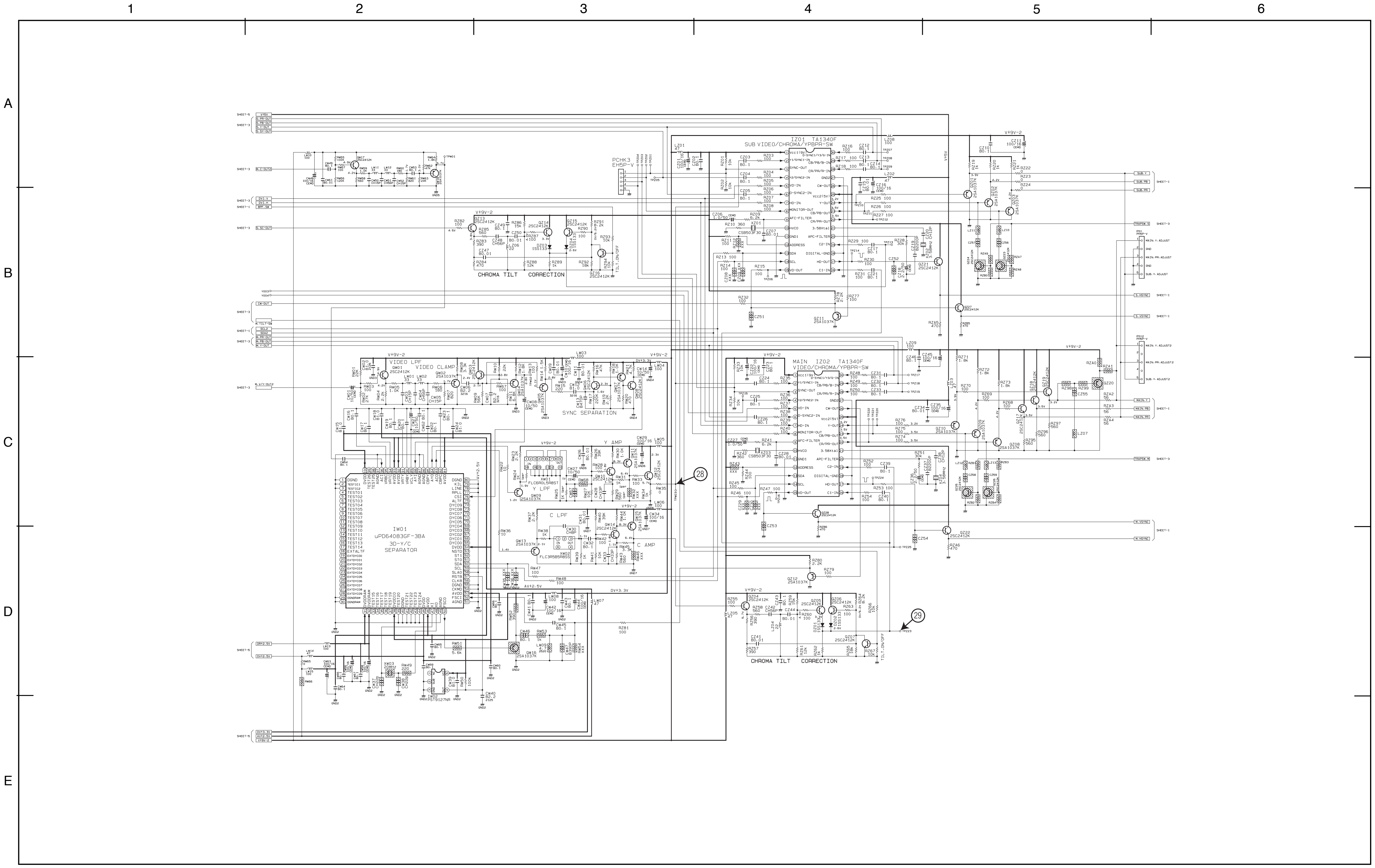
BASIC CIRCUIT DIAGRAM


1
2
3
4
5
6
A
B
C
D
E
IZ01 TA1340F
SUB VIDEO/CHROMA/YPBPR-SW
PCHK3
EH5P-V
CHROMA TILT CORRECTION
VIDEO LPF
VIDEO CLAMP
SYNC SEPARATION
IW01
uPD64083GF-3BA
3D-Y/C
SEPARATOR
Y AMP
Y LPF
C LPF
C AMP
MAIN IZ02 TA1340F
VIDEO/CHROMA/YPBPR-SW
CHROMA TILT CORRECTION
28
29
V+9V-2
DV+3.3V

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

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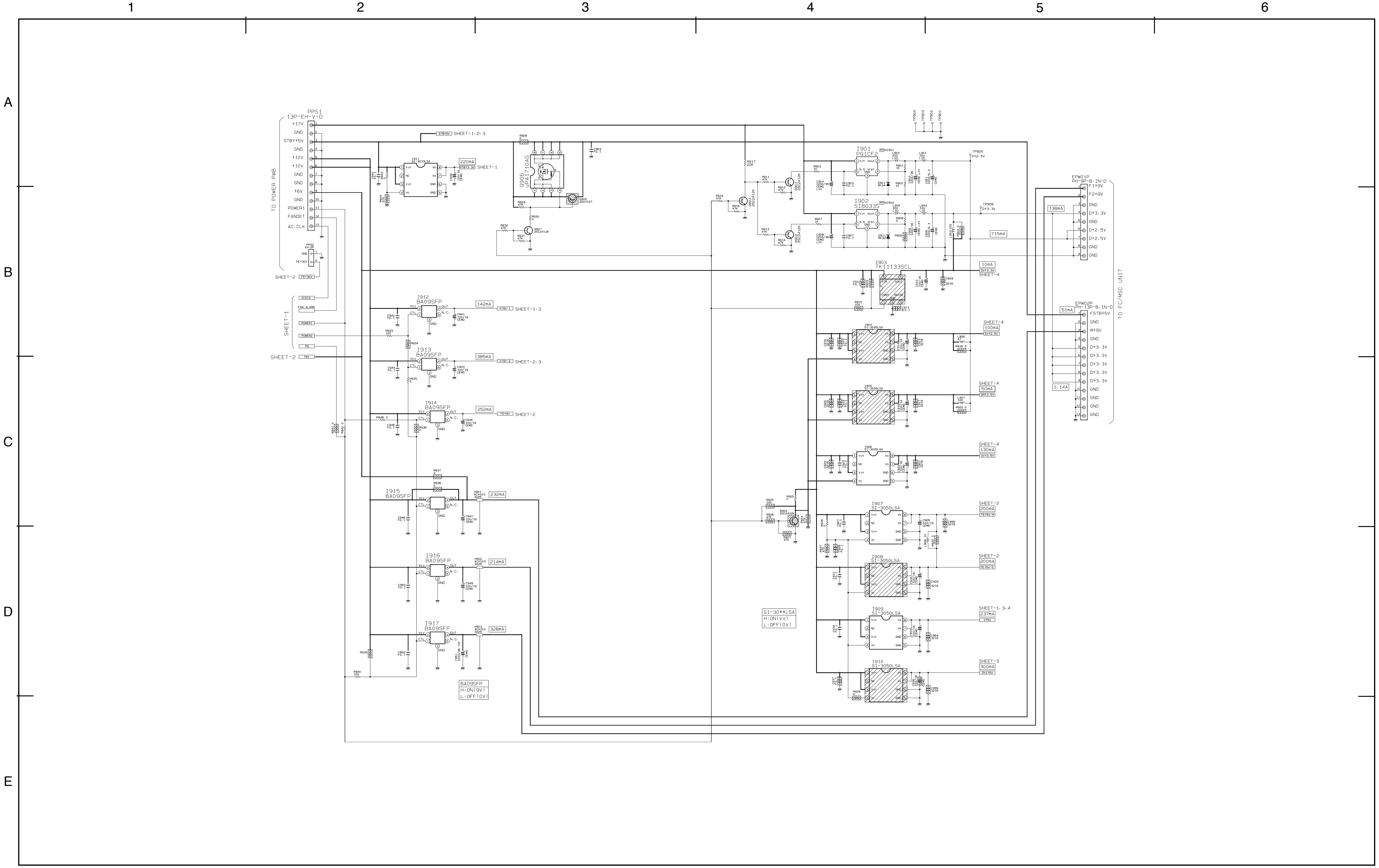
BASIC CIRCUIT DIAGRAM


1
2
3
4
5
6
A
B
C
D
E
PPS1
13P-EH-V-D
+17V
GND
STBY+5V
GND
+10V
+10V
GND
GND
+6V
GND
POWER1
FANDET
AC-CLK
TO POWER PWB
SHEET-1
SHEET-2
SHEET-1·2·3
220mA
I901
PQ1CF2
I902
SI8033S
I903
TK11133SCL
I912
BA09SFP
142mA
SHEET-1·3
I913
BA09SFP
385mA
SHEET-2·3
I914
BA09SFP
252mA
I915
BA09SFP
232mA
I916
BA09SFP
214mA
I917
BA09SFP
328mA
BA09SFP
H:ON(9V)
L:OFF(0V)
SI-30**LSA
H:ON(V0)
L:OFF(0V)
TP905
D+2.5V
TP906
D+3.3V
138mA
715mA
10mA
SHEET-4
100mA
50mA
130mA
I907
SI-3050LSA
200mA
I908
SI-3050LSA
I909
SI-3050LSA
237mA
SHEET-1·3·4
I910
SI-3050LSA
SHEET-3
300mA
EPW01P
F1+9V
F2+9V
GND
D+3.3V
D+2.5V
EPW02P
51mA
FSTB+5V
M+9V
1.14A
TO FC/MSC UNIT

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

AVC1-U AV 5/5

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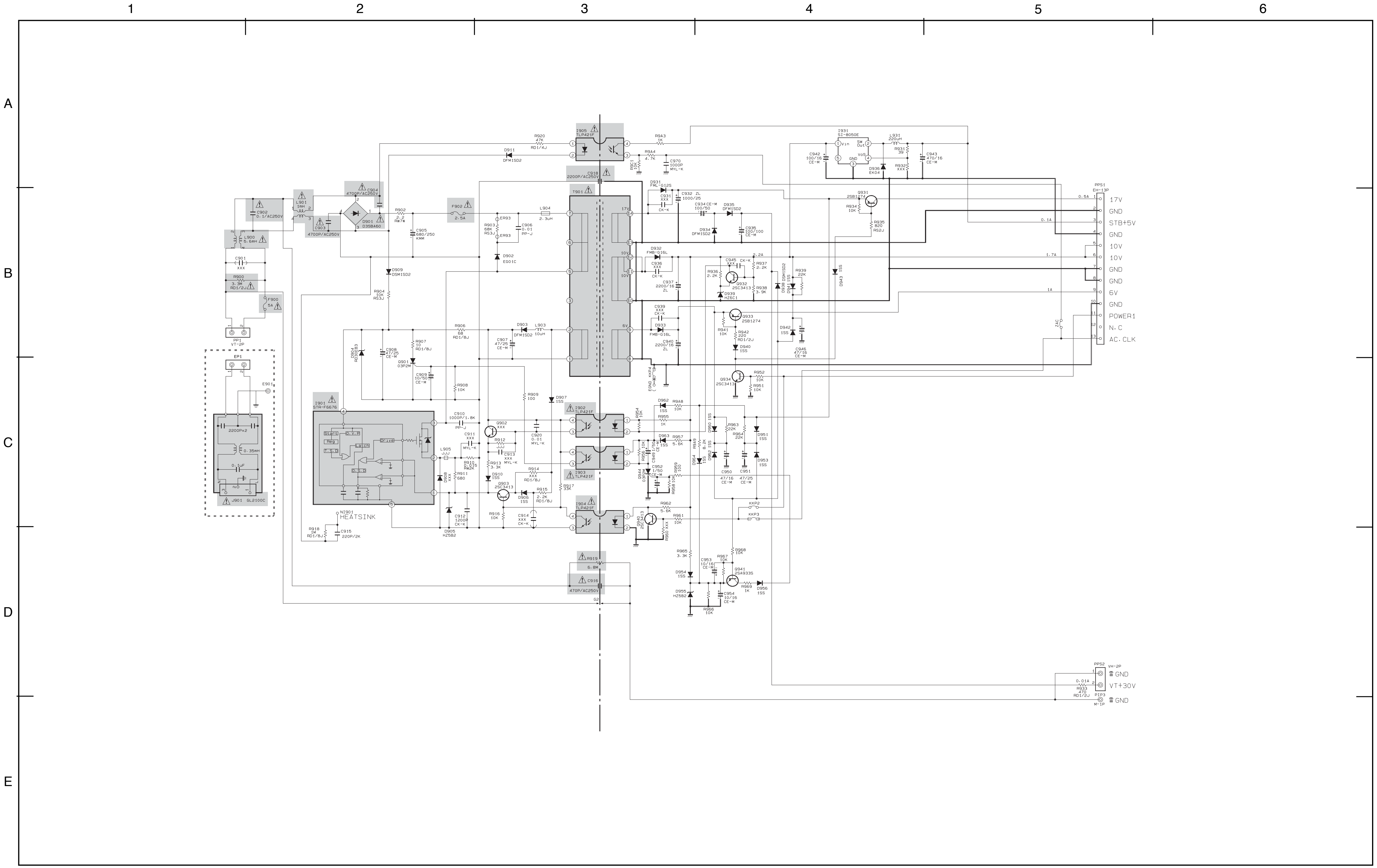
BASIC CIRCUIT DIAGRAM


1
2
3
4
5
6
A
B
C
D
E
PPS1
EH-13P
0.5A
0.1A
1.7A
1A
17V
GND
STB+5V
GND
10V
10V
GND
GND
6V
GND
POWER1
N.C
AC.CLK
ZAC
PPS2
VH-2P
0.01A
R933
470
RD1/2J
PIP3
M-1P
雷 GND
VT+30V
雷 GND
I901
STR-F6676
HEATSINK
T901
I905
TLP421F
I902
TLP421F
I903
TLP421F
I904
TLP421F
I931
SI-8050E
D901
D3SBA60
F901
F902
2.5A
L901
L902
PP1
VT-2P
EP1
J901
SL2100C
E901
C902
0.1/AC250V
C903
4700P/AC250V
C904
4700P/AC250V
C918
2200P/AC250V
C916
470P/AC250V
R919
6.8M
R900
3.3M
RD1/2J
L904
2.2uH
L903
10uH
L931
220uH
C905
680/250
Q931
2SB1274
Q932
2SC3413
Q933
2SB1274
Q934
2SC3413
Q941
2SA933S
Q902
Q903
2SC3413

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
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AVC1-U POWER

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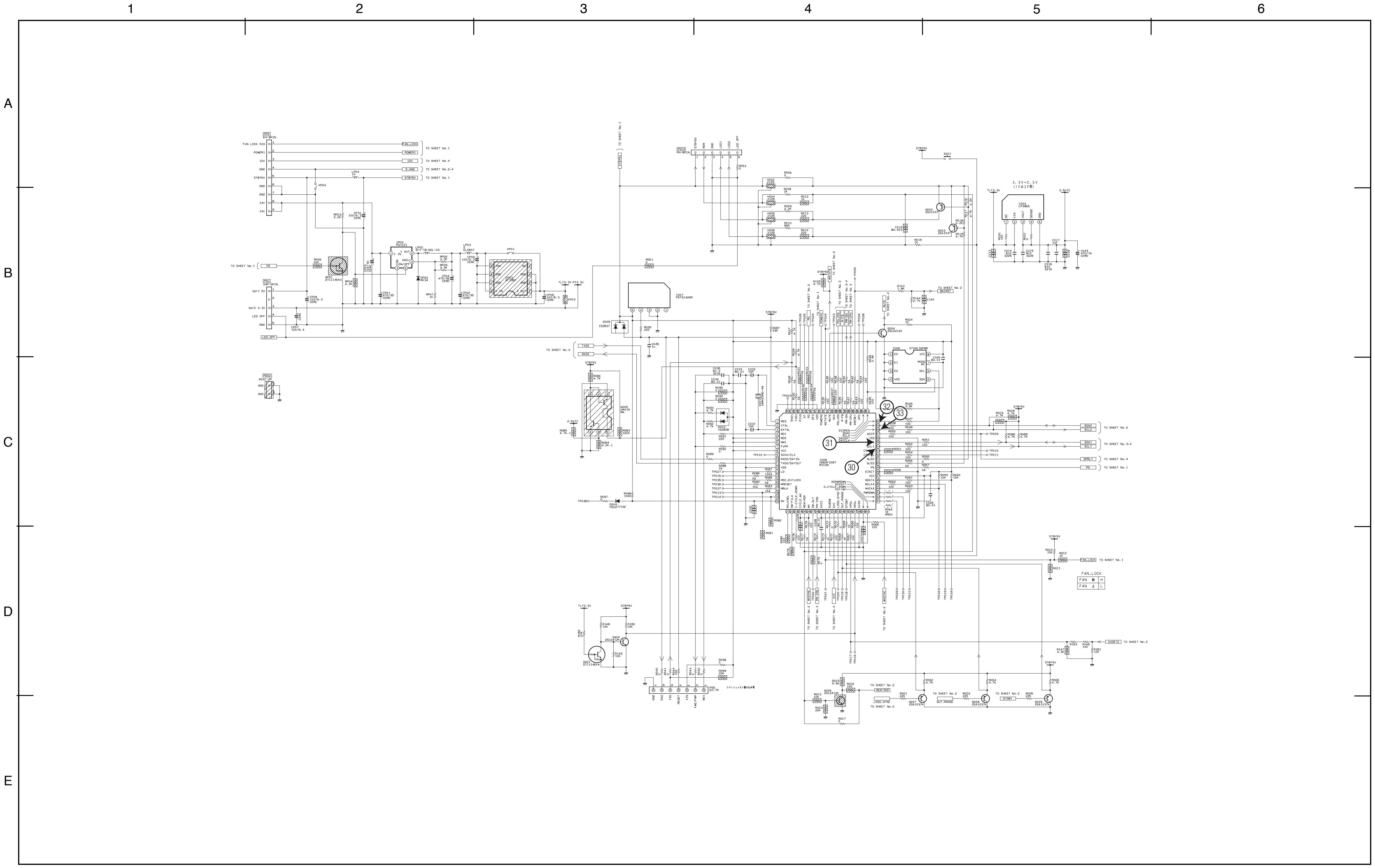
BASIC CIRCUIT DIAGRAM


1
2
3
4
5
6
A
B
C
D
E
TO SHEET No.1
TO SHEET No.2
TO SHEET No.4
30
31
32
33
FAN LOCK
FAN H
FAN L

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

PT2-E SIGNAL/AUDIO 1/4

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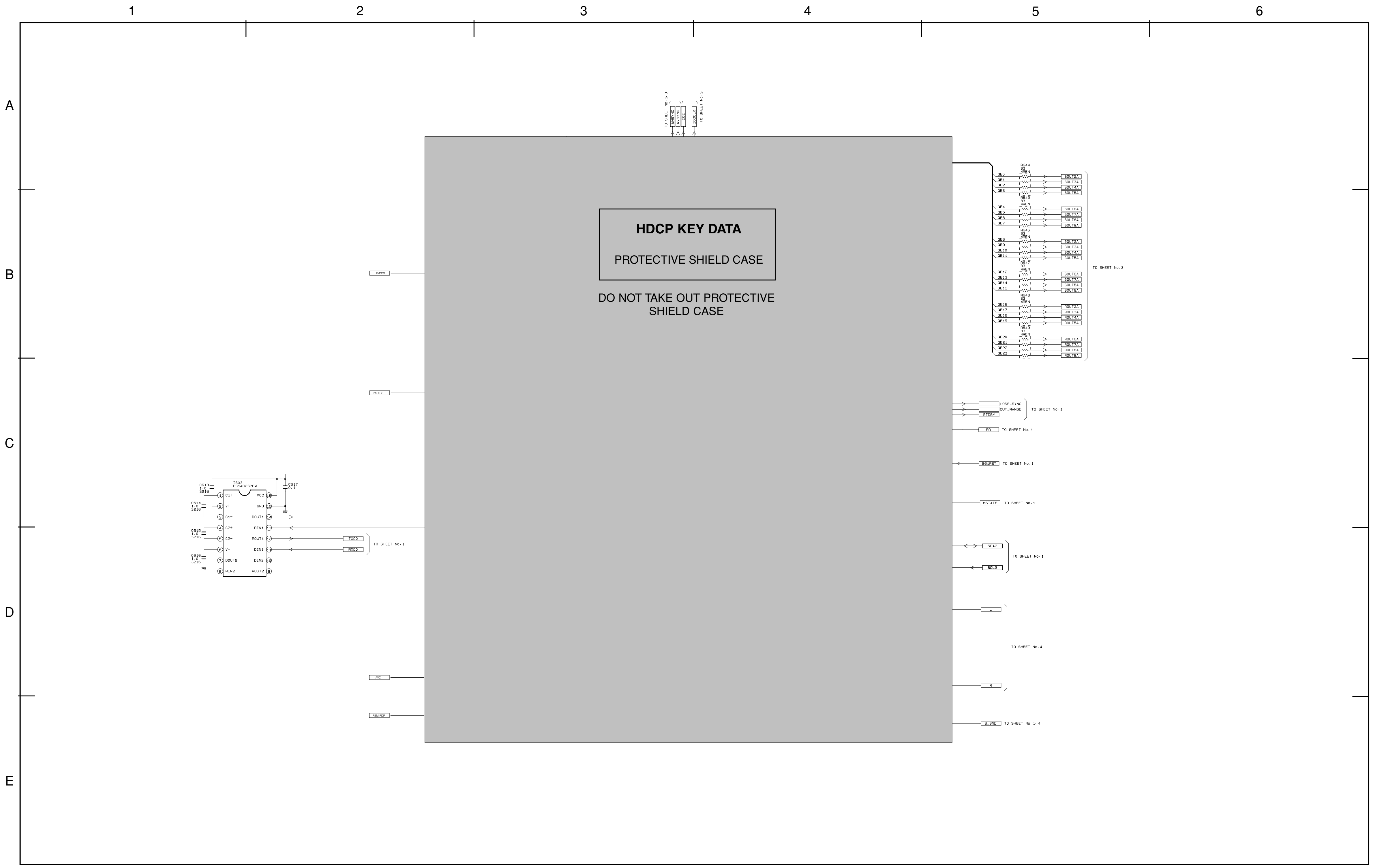
BASIC CIRCUIT DIAGRAM


1
2
3
4
5
6
A
B
C
D
E
TO SHEET No.1.3
WHSYNC
WVSYNC
IOE
IODCLK
TO SHEET No.3
HDCP KEY DATA
PROTECTIVE SHIELD CASE
DO NOT TAKE OUT PROTECTIVE SHIELD CASE
AVDET2
PARITY
AVC
REM-PDP
C613 1.0 3216
C614 1.0 3216
C615 1.0 3216
C616 1.0 3216
C617 0.1
I603 DS14C232CM
1 C1+
2 V+
3 C1−
4 C2+
5 C2−
6 V−
7 DOUT2
8 RIN2
16 VCC
15 GND
14 DOUT1
13 RIN1
12 ROUT1
11 DIN1
10 DIN2
9 ROUT2
TXD0
RXD0
TO SHEET No.1
R644 33 4REN
R645 33 4REN
R646 33 4REN
R647 33 4REN
R648 33 4REN
R649 33 4REN
QE0
QE1
QE2
QE3
QE4
QE5
QE6
QE7
QE8
QE9
QE10
QE11
QE12
QE13
QE14
QE15
QE16
QE17
QE18
QE19
QE20
QE21
QE22
QE23
BOUT2A
BOUT3A
BOUT4A
BOUT5A
BOUT6A
BOUT7A
BOUT8A
BOUT9A
GOUT2A
GOUT3A
GOUT4A
GOUT5A
GOUT6A
GOUT7A
GOUT8A
GOUT9A
ROUT2A
ROUT3A
ROUT4A
ROUT5A
ROUT6A
ROUT7A
ROUT8A
ROUT9A
TO SHEET No.3
LOSS_SYNC
OUT_RANGE
STDBY
TO SHEET No.1
PD
TO SHEET No.1
861RST
TO SHEET No.1
MSTATE
TO SHEET No.1
SDA2
SCL2
TO SHEET No.1
L
R
TO SHEET No.4
S_GND
TO SHEET No.1.4

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

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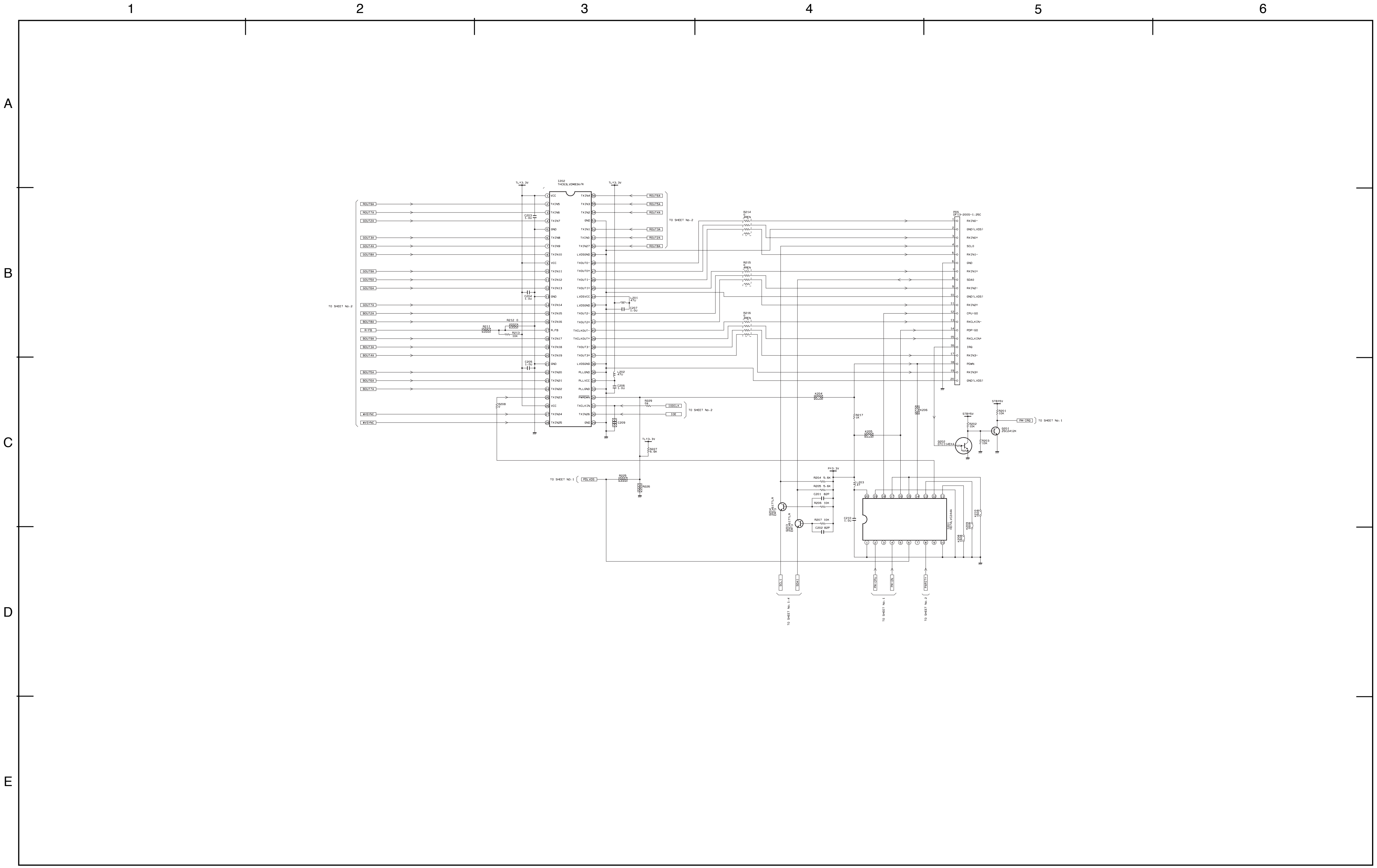
BASIC CIRCUIT DIAGRAM


1
2
3
4
5
6
A
B
C
D
E
TO SHEET No.2
ROUT9A
ROUT7A
GOUT2A
GOUT3A
GOUT4A
GOUT8A
GOUT9A
GOUT5A
GOUT6A
GOUT7A
BOUT2A
BOUT8A
R-FB
BOUT9A
BOUT3A
BOUT4A
BOUT5A
BOUT6A
BOUT7A
WHSYNC
WVSYNC
R211
R212 0
R213 10K
R208 0
TL+3.3V
C203 1.0U
C204 1.0U
C205 1.0U
I202
THC63LVDM83A/R
VCC
TXIN5
TXIN6
TXIN7
GND
TXIN8
TXIN9
TXIN10
TXIN11
TXIN12
TXIN13
TXIN14
TXIN15
TXIN16
R_FB
TXIN17
TXIN18
TXIN19
TXIN20
TXIN21
TXIN22
TXIN23
TXIN24
TXIN25
TXIN4
TXIN3
TXIN2
TXIN1
TXIN0
TXIN27
LVDSGND
TXOUT0-
TXOUT0+
TXOUT1-
TXOUT1+
LVDSVCC
TXOUT2-
TXOUT2+
TXCLKOUT-
TXCLKOUT+
TXOUT3-
TXOUT3+
PLLGND
PLLVCC
PWRDWN
TXCLKIN
TXIN26
L201 47U
C207 1.0U
L202 47U
C206 1.0U
C209
ROUT6A
ROUT5A
ROUT4A
ROUT3A
ROUT2A
ROUT8A
R229 0Ω
IODCLK
IOE
R227 5.6K
TO SHEET NO.1
PDLVDS
R225
R226
R214 0 4REN
R215 0 4REN
R216 0 4REN
PDS
DF13-20DS-1.25C
RXIN0-
GND(LVDS)
RXIN0+
SCL0
RXIN1-
GND
RXIN1+
SDA0
RXIN2-
RXIN2+
CPU-GO
RXCLKIN-
PDP-GO
RXCLKIN+
IRQ
RXIN3-
PDWN
RXIN3+
K204
K205
K206
R217 1K
STB+5V
R201 10K
R202 10K
R203 10K
Q201 2SC2412K
Q202 DTC114EKA
PM-IRQ
TO SHEET No.1
P+3.3V
R204 5.6K
R205 5.6K
C201 82P
R206 10K
R207 10K
C202 82P
L203 47
C210 1.0U
Q204 2SC4617TLR EMT3
Q203 2SC4617TLR EMT3
I201 HD74LVC244A
K208 1608
K209 1608
K210 1608
SCL1
SDA1
PM-CPU
PM-ON
PARITY
TO SHEET No.1.4
TO SHEET No.1
TO SHEET No.2

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
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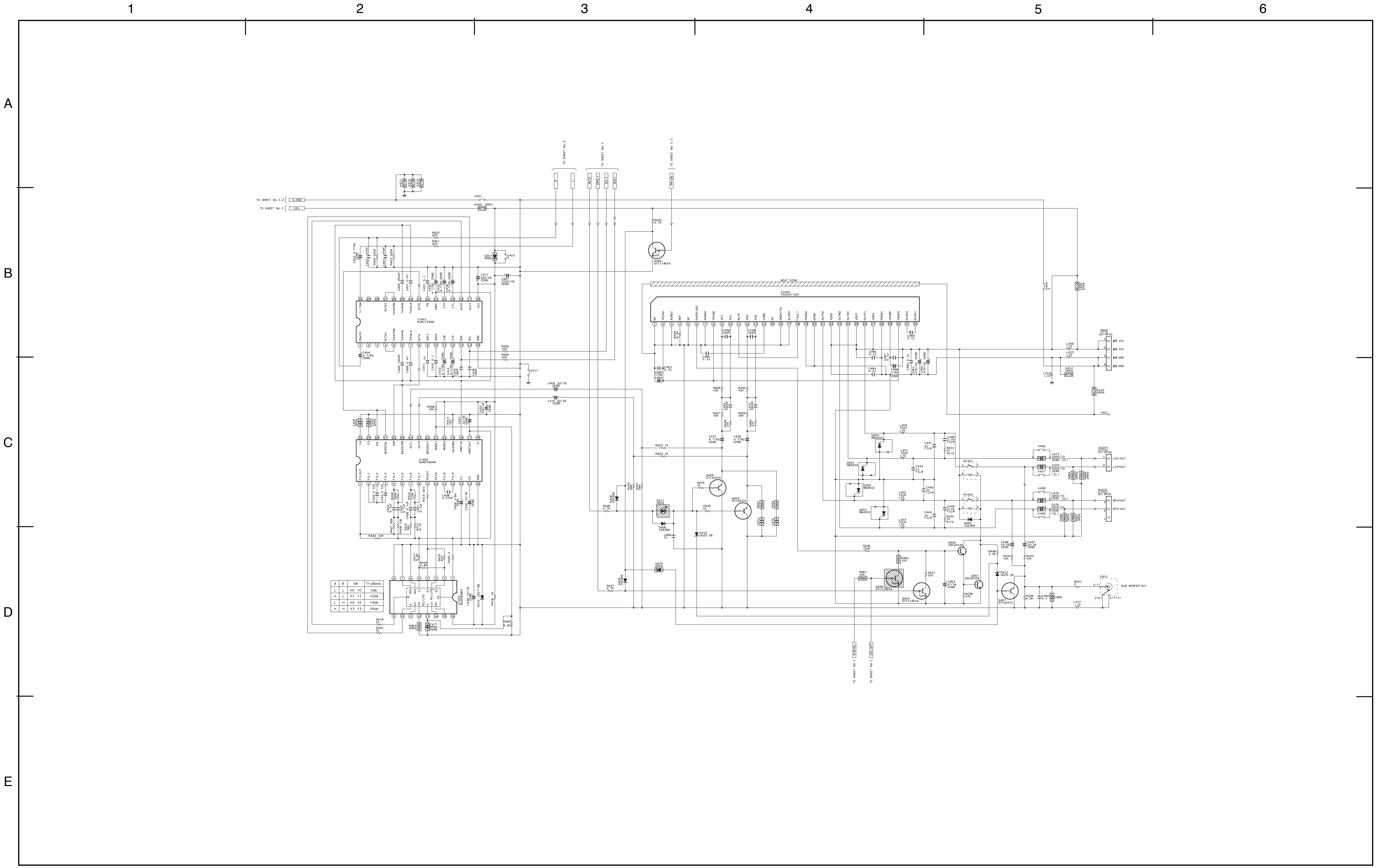
BASIC CIRCUIT DIAGRAM



A	B	SW	TruBass
L	L	X0 Y0	0db
H	L	X1 Y1	+2db
L	H	X2 Y2	+4db
H	H	X3 Y3	+6db

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
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PT2-E SIGNAL/AUDIO 4/4

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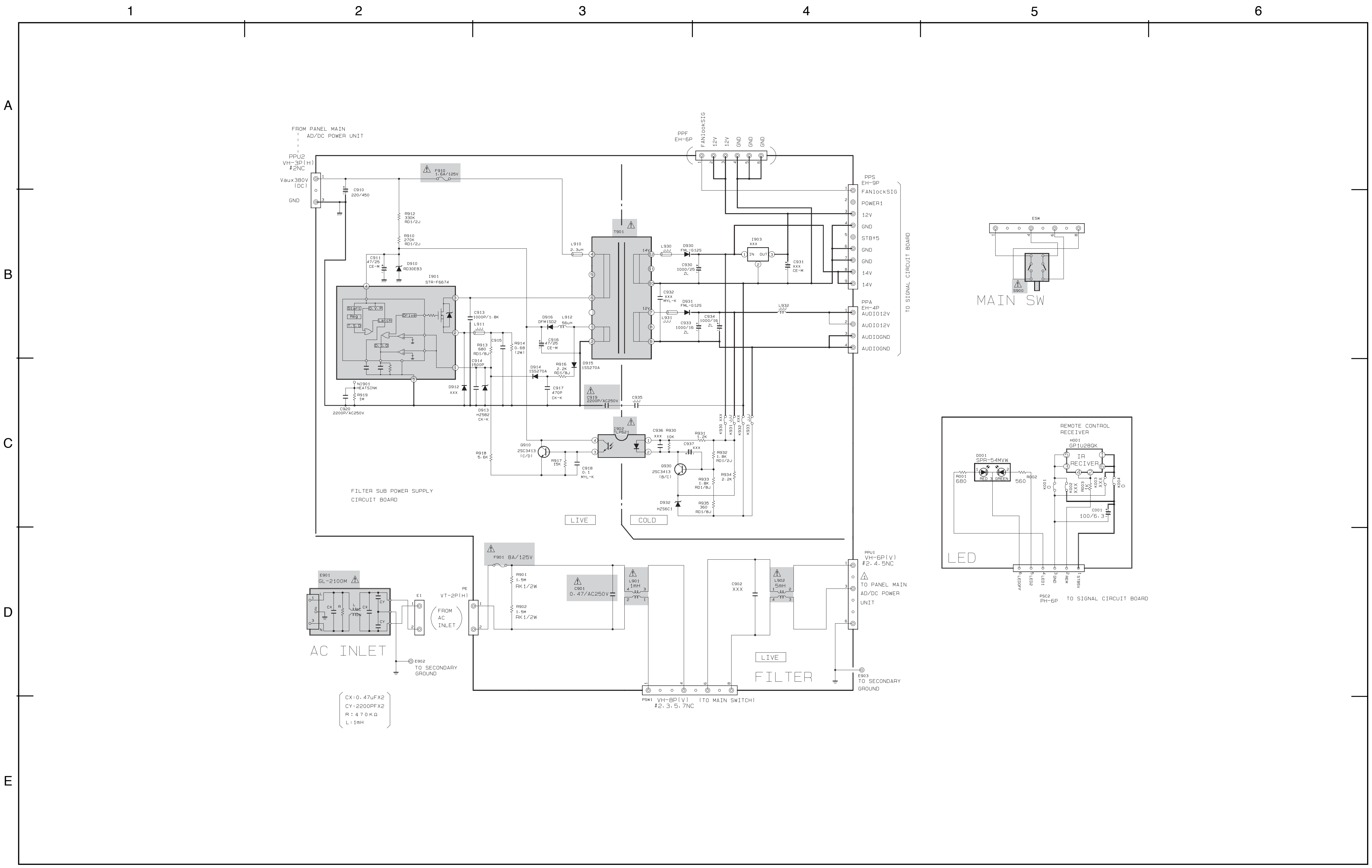
BASIC CIRCUIT DIAGRAM


1
2
3
4
5
6
A
B
C
D
E
FROM PANEL MAIN
AD/DC POWER UNIT
PPU2
VH-3P(H)
#2NC
Vaux380V
(DC)
GND
C910
220/450
F910
1.6A/125V
R912
330K
RD1/2J
R910
270K
RD1/2J
C911
47/25
CE-M
D910
RD30EB3
I901
STR-F6674
Start
O.V.P
Reg
Drive
Latch
T.S.D
D.S.D
NI901
HEATSINK
R919
1M
C920
2200P/AC250V
C913
1000P/1.8K
L911
JJJ
C915
R913
680
RD1/8J
R914
0.68
(2W)
C914
1500P
D912
XXX
D913
HZ5B2
CK-K
D916
DFM1SD2
L912
56uH
C916
47/25
CE-M
D914
1SS270A
R916
2.2K
RD1/8J
D915
1SS270A
C917
470P
CK-K
L910
2.3uH
T901
14V
12V
C919
2200P/AC250V
C935
JJJ
I902
TLP621
Q910
2SC3413
(C/D)
R917
15K
C918
0.1
MYL-K
R918
5.6K
FILTER SUB POWER SUPPLY
CIRCUIT BOARD
LIVE
COLD
PPF
EH-6P
FANlookSIG
12V
12V
GND
GND
GND
L930
JJJ
D930
FML-G12S
C930
1000/25
ZL
I903
XXX
IN
OUT
C931
XXX
CE-M
C932
XXX
MYL-K
D931
FML-G12S
L931
JJJ
C933
1000/16
ZL
C934
1000/16
ZL
L932
JJJ
PPS
EH-9P
FANlockSIG
POWER1
12V
GND
STB+5
GND
GND
14V
14V
PPA
EH-4P
AUDIO12V
AUDIO12V
AUDIOGND
AUDIOGND
TO SIGNAL CIRCUIT BOARD
K930 XXX
K931 JJJ
K932 XXX
K933 JJJ
C936
XXX
R930
10K
R931
1.2K
C937
XXX
R932
1.8K
RD1/2J
Q930
2SC3413
(B/C)
R933
1.8K
RD1/8J
R934
2.2K
D932
HZS6C1
R935
360
RD1/8J
ESW
S900
MAIN SW
REMOTE CONTROL
RECEIVER
H001
GP1U28QK
IR
RECIVER
D001
SPR-54MVW
RED
GREEN
R001
680
R002
560
K001
0
K002
XXX
R003
1K
K003
XXX
K004
0
C001
100/6.3
LED
LEDOFF
LED2
LED1
GND
REM
STB5V
PSC2
PH-6P
TO SIGNAL CIRCUIT BOARD
E901
GL-2100M
CX
R
L
CY
AC INLET
E1
FROM
AC
INLET
PE
VT-2P(H)
E902
TO SECONDARY
GROUND
CX:0.47uFX2
CY:2200PFX2
R:470KΩ
L:1mH
F901 8A/125V
R901
1.5M
RK1/2W
R902
1.5M
RK1/2W
C901
0.47/AC250V
L901
1mH
C902
XXX
L902
5mH
LIVE
FILTER
PSW1
VH-8P(V)
#2.3.5.7NC
(TO MAIN SWITCH)
PPU1
VH-6P(V)
#2.4.5NC
TO PANEL MAIN
AD/DC POWER
UNIT
E903
TO SECONDARY
GROUND

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

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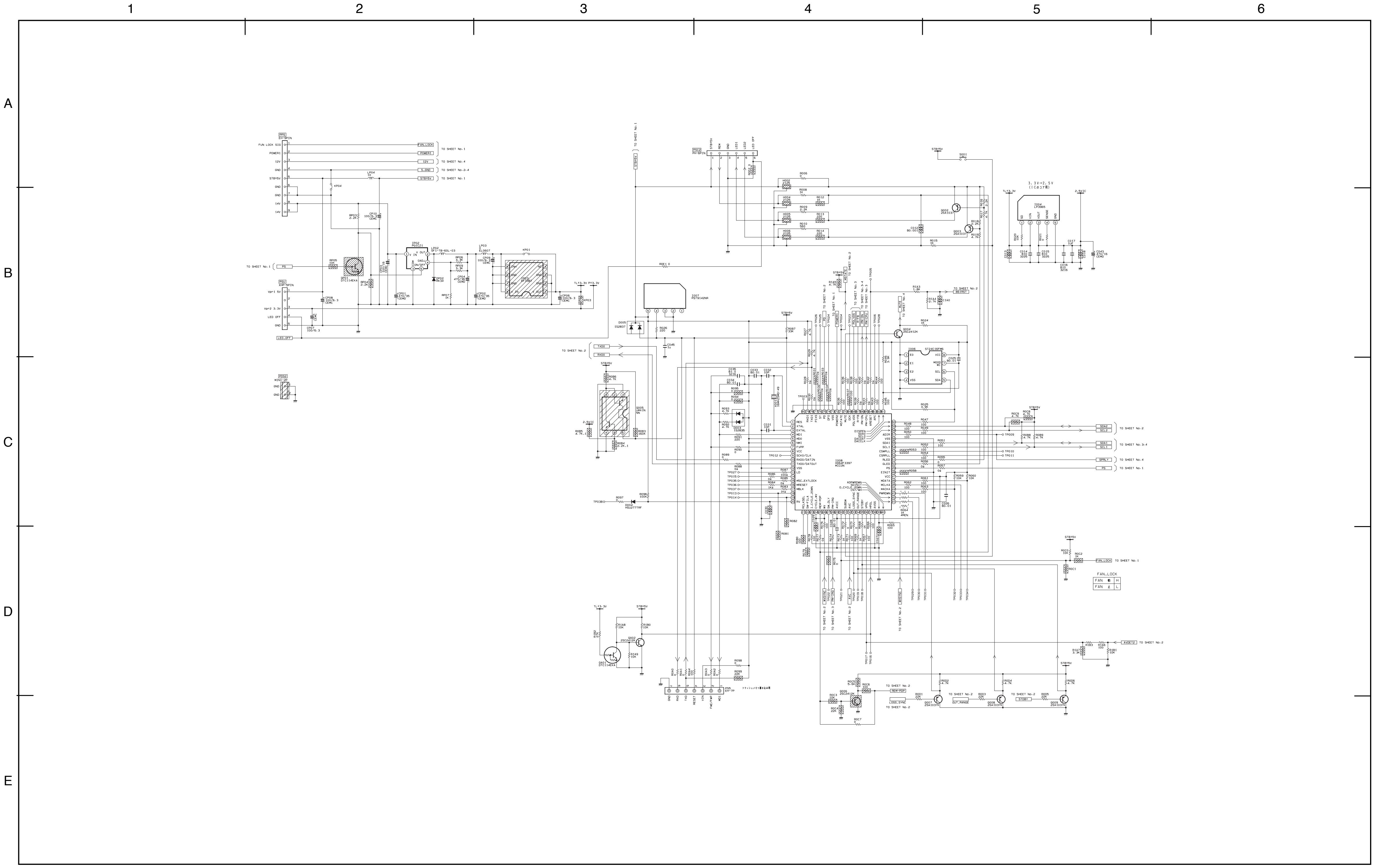
BASIC CIRCUIT DIAGRAM



- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
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PT2-G SIGNAL/AUDIO 1/4

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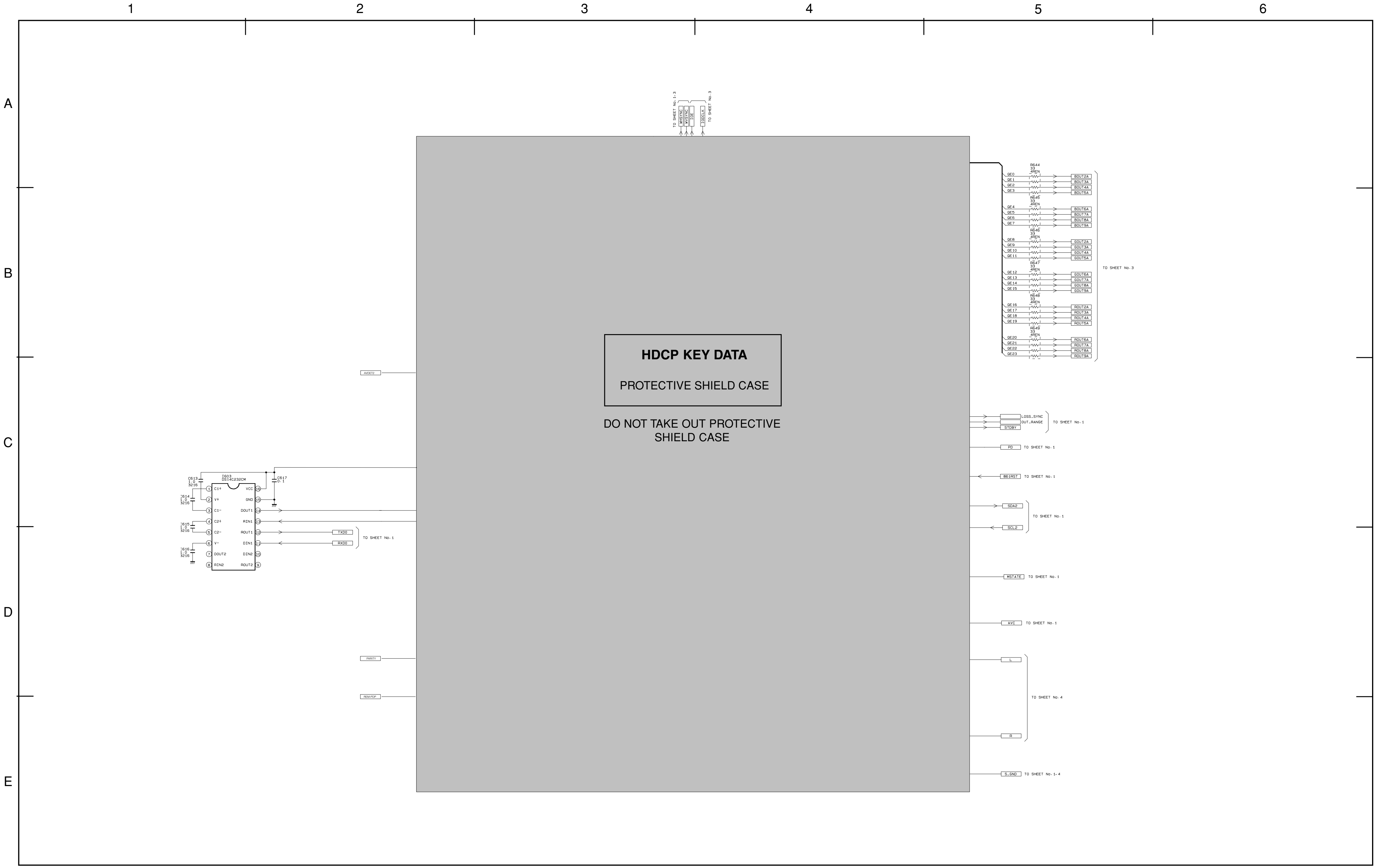
BASIC CIRCUIT DIAGRAM


1
2
3
4
5
6
A
B
C
D
E
TO SHEET No.1.3
WHSYNC
WVSYNC
IOE
IODCLK
TO SHEET No.3
HDCP KEY DATA
PROTECTIVE SHIELD CASE
DO NOT TAKE OUT PROTECTIVE SHIELD CASE
R644 33 4REN
QE0
QE1
QE2
QE3
BOUT2A
BOUT3A
BOUT4A
BOUT5A
R645 33 4REN
QE4
QE5
QE6
QE7
BOUT6A
BOUT7A
BOUT8A
BOUT9A
R646 33 4REN
QE8
QE9
QE10
QE11
GOUT2A
GOUT3A
GOUT4A
GOUT5A
R647 33 4REN
QE12
QE13
QE14
QE15
GOUT6A
GOUT7A
GOUT8A
GOUT9A
R648 33 4REN
QE16
QE17
QE18
QE19
ROUT2A
ROUT3A
ROUT4A
ROUT5A
R649 33 4REN
QE20
QE21
QE22
QE23
ROUT6A
ROUT7A
ROUT8A
ROUT9A
TO SHEET No.3
LOSS_SYNC
OUT_RANGE
STDBY
TO SHEET No.1
PD
TO SHEET No.1
861RST
TO SHEET No.1
SDA2
SCL2
TO SHEET No.1
MSTATE
TO SHEET No.1
AVC
TO SHEET No.1
L
R
TO SHEET No.4
S_GND
TO SHEET No.1.4
AVDET2
PARITY
REM-PDP
C613 1.0 3216
C614 1.0 3216
C615 1.0 3216
C616 1.0 3216
C617 0.1
I603
DS14C232CM
1 C1+
2 V+
3 C1-
4 C2+
5 C2-
6 V-
7 DOUT2
8 RIN2
16 VCC
15 GND
14 DOUT1
13 RIN1
12 ROUT1
11 DIN1
10 DIN2
9 ROUT2
TXD0
RXD0
TO SHEET No.1

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
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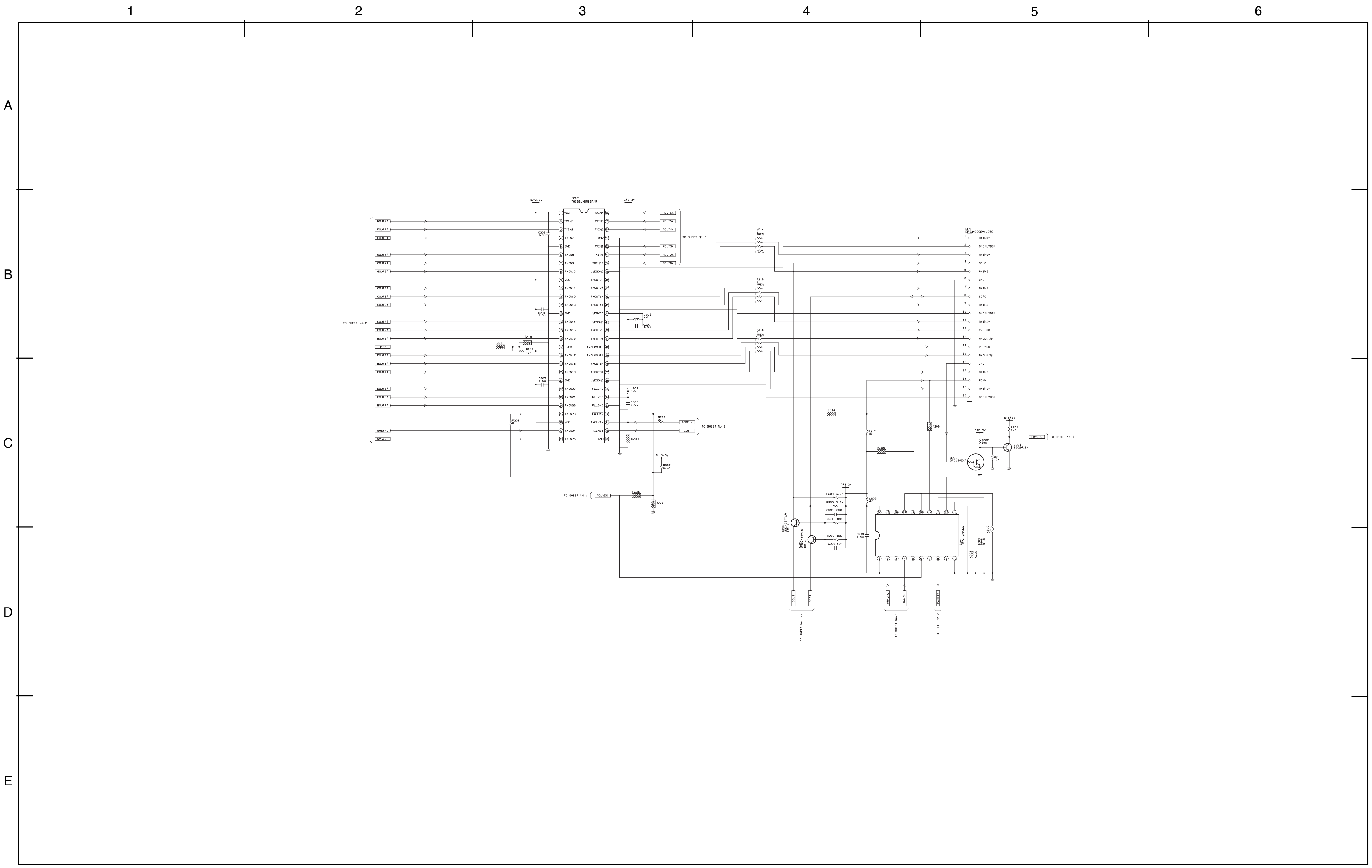
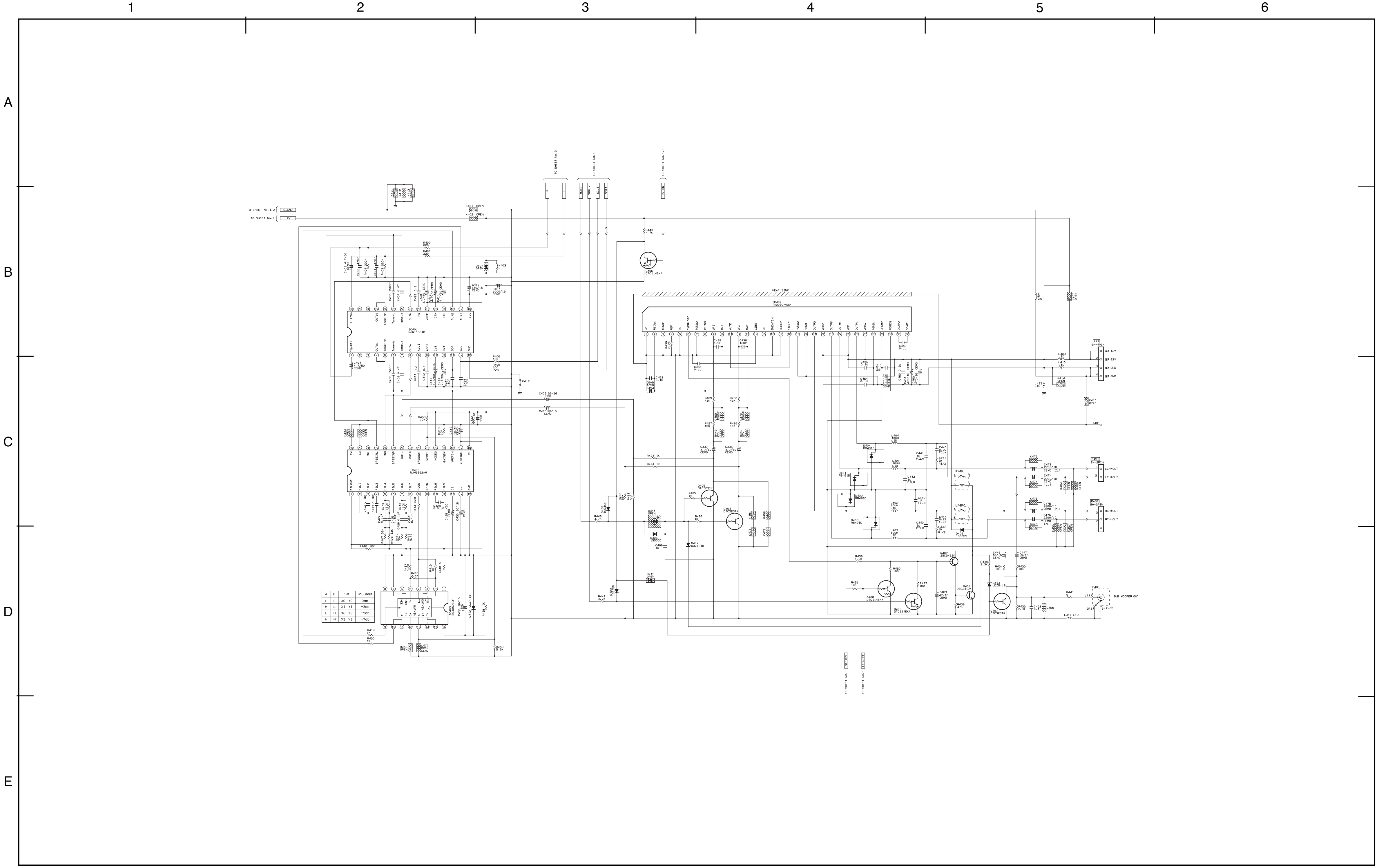
BASIC CIRCUIT DIAGRAM


1
2
3
4
5
6
A
B
C
D
E
I202
THC63LVDM83A/R
TL+3.3V
VCC
TXIN5
TXIN6
TXIN7
GND
TXIN8
TXIN9
TXIN10
TXIN11
TXIN12
TXIN13
TXIN14
TXIN15
TXIN16
R_FB
TXIN17
TXIN18
TXIN19
TXIN20
TXIN21
TXIN22
TXIN23
TXIN24
TXIN25
TXIN4
TXIN3
TXIN2
TXIN1
TXIN0
TXIN27
LVDSGND
TXOUT0-
TXOUT0+
TXOUT1-
TXOUT1+
LVDSVCC
TXOUT2-
TXOUT2+
TXCLKOUT-
TXCLKOUT+
TXOUT3-
TXOUT3+
PLLGND
PLLVCC
PWRDWN
TXCLKIN
TXIN26
ROUT9A
ROUT7A
GOUT2A
GOUT3A
GOUT4A
GOUT8A
GOUT9A
GOUT5A
GOUT6A
GOUT7A
BOUT2A
BOUT8A
R-FB
BOUT9A
BOUT3A
BOUT4A
BOUT5A
BOUT6A
BOUT7A
WHSYNC
WVSYNC
ROUT6A
ROUT5A
ROUT4A
ROUT3A
ROUT2A
ROUT8A
TO SHEET No.2
C203 1.0U
C204 1.0U
C205 1.0U
C206 1.0U
C207 1.0U
C209
L201 47U
L202 47U
R208 0
R211
R212 0
R213 10K
R229 0Ω
IODCLK
IOE
R227 5.6K
TO SHEET NO.1
PDLVDS
R225
R226
R214 0 4REN
R215 0 4REN
R216 0 4REN
PDS
DF13-20DS-1.25C
RXIN0-
GND(LVDS)
RXIN0+
SCL0
RXIN1-
GND
RXIN1+
SDA0
RXIN2-
RXIN2+
CPU-GO
RXCLKIN-
PDP-GO
RXCLKIN+
IRQ
RXIN3-
PDWN
RXIN3+
K204
K205
K206
R217 1K
STB+5V
R201 10K
R202 10K
R203 10K
Q201 2SC2412K
Q202 DTC114EKA
PM-IRQ
TO SHEET No.1
P+3.3V
R204 5.6K
R205 5.6K
C201 82P
R206 10K
R207 10K
C202 82P
L203 47
C210 1.0U
Q204 2SC4617TLR EMT3
Q203 2SC4617TLR EMT3
I201 HD74LVC244A
K208 1608
K209 1608
K210 1608
SCL1
SDA1
PM-CPU
PM-ON
PARITY
TO SHEET No.1.4
TO SHEET No.1
TO SHEET No.2

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

BASIC CIRCUIT DIAGRAM

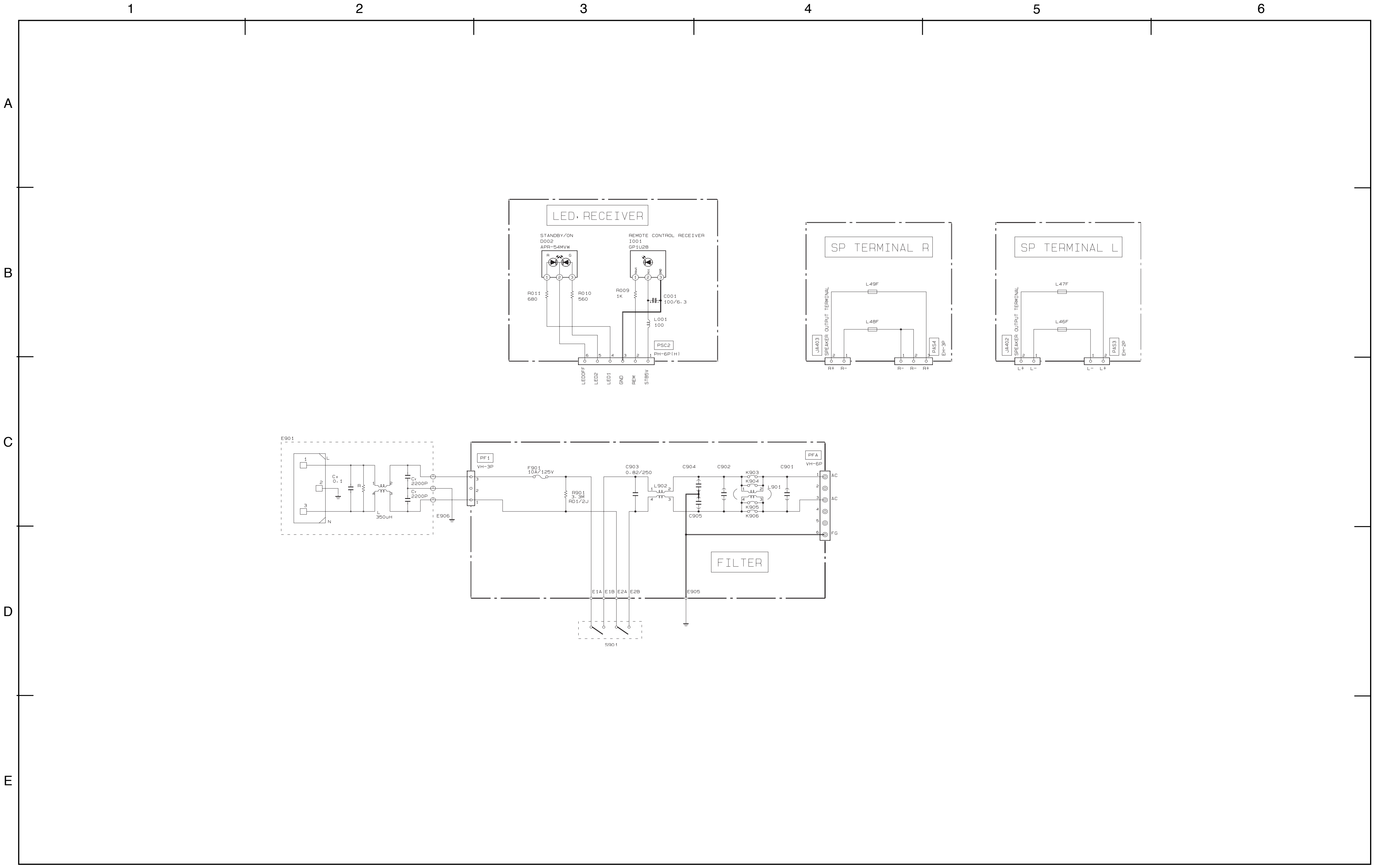

1
2
3
4
5
6
A
B
C
D
E
TO SHEET No.1·2 S_GND
TO SHEET No.1 12V
TO SHEET No.2 R L
TO SHEET No.1 MUTE SPRLY SCL1 SDA1
TO SHEET No.1·3 PM-ON
K401 OPEN
K402 OPEN
IC401 NJW1133AM
IC402 NJM2192AM
IC403 BU4052BCF
IC404 TA2020-020
HEAT SINK
Q406 DTC114EKA
Q407 DTC323TK
D410 UDZ7.5B
D413 UDZ5.1B
PPA EH-4PIN
音声 12V
音声 12V
音声 GND
音声 GND
T401
PAS1 EH-2PIN
LCH-OUT
LCH+OUT
PAS2 EH-3PIN
RCH+OUT
RCH-OUT
E401
SUB WOOFER OUT
1(T)
2(S)
3(アース)
TO SHEET No.1
TO SHEET No.1

A	B	SW	TruBass
L	L	X0 Y0	0db
H	L	X1 Y1	+3db
L	H	X2 Y2	+5db
H	H	X3 Y3	+7db

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

BASIC CIRCUIT DIAGRAM

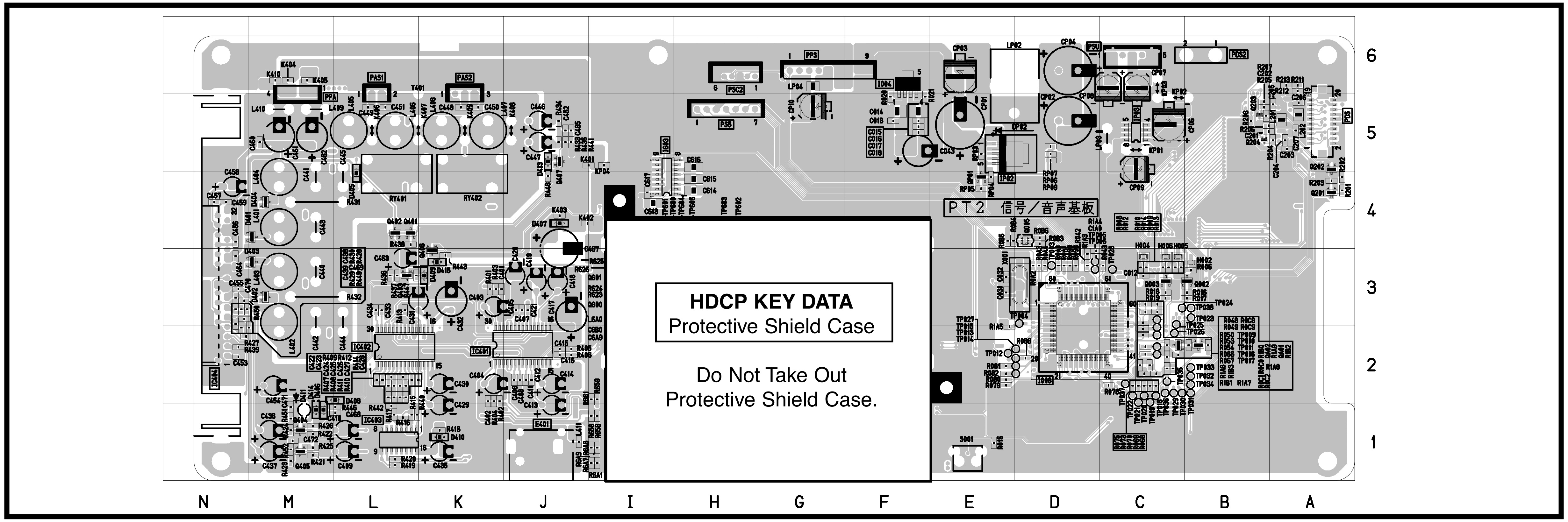

1
2
3
4
5
6
A
B
C
D
E
LED, RECEIVER
STANDBY/ON
D002
APR-54MVW
R
G
REMOTE CONTROL RECEIVER
I001
GP1U28
Vout
Vcc
GND
R011
680
R010
560
R009
1K
C001
100/6.3
L001
100
PSC2
PH-6P(H)
LEDOFF
LED2
LED1
GND
REM
STB5V
SP TERMINAL R
L49F
L48F
JA403
SPEAKER OUTPUT TERMINAL
PAS4
EH-3P
R+
R-
R-
R-
R+
SP TERMINAL L
L47F
L46F
JA402
SPEAKER OUTPUT TERMINAL
PAS3
EH-2P
L+
L-
L-
L+
E901
L
N
Cx
0.1
R
L
350uH
Cy
2200P
Cy
2200P
E906
PF1
VH-3P
F901
10A/125V
R901
3.3M
RD1/2J
C903
0.82/250
L902
C904
C905
C902
K903
K904
L901
K905
K906
C901
PFA
VH-6P
AC
AC
FG
FILTER
E1A
E1B
E2A
E2B
E905
S901

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

PT2-G FILTER

PRINTED CIRCUIT BOARD

PT2-E SIGNAL/AUDIO P.W.B. (Side A) *This is a 4 layer board, thus inner layers are not shown, only surface layers.



HDCP KEY DATA
Protective Shield Case
Do Not Take Out
Protective Shield Case.
PT2 信号/音声基板
6
5
4
3
2
1
N
M
L
K
J
I
H
G
F
E
D
C
B
A

Component location tables for PT2-E signal/audio P.W.B (Side B)

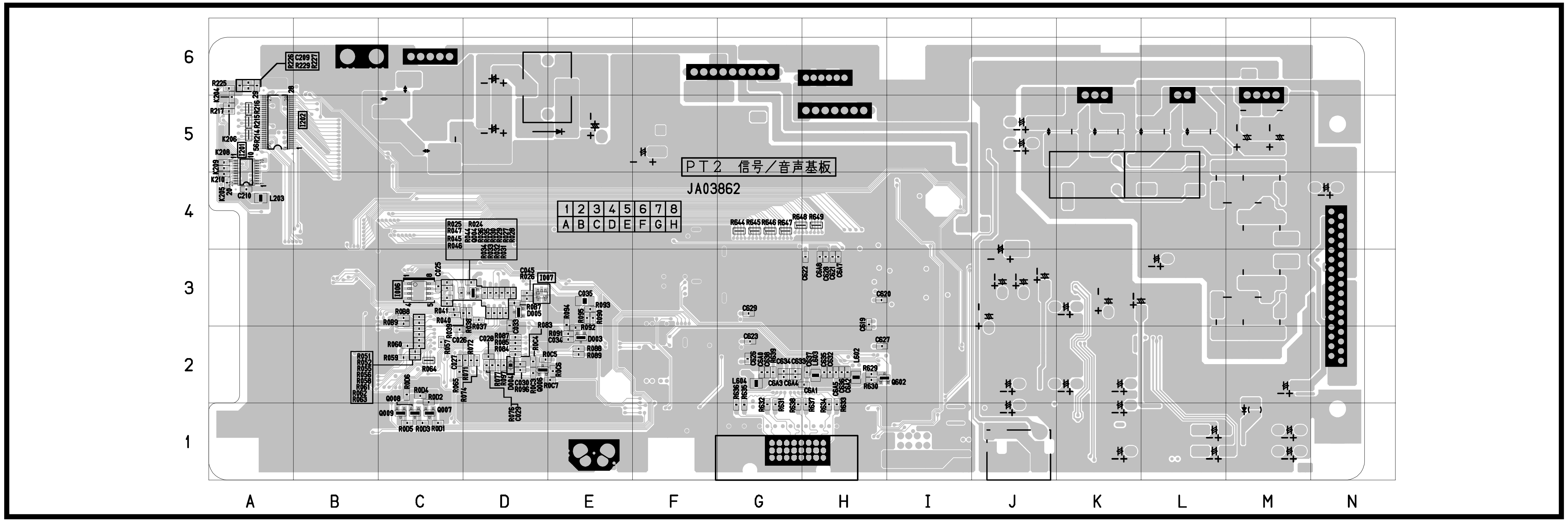
Symbol #	Location
D401	M4
D402	M3
D403	M3
D404	M4
D405	L4
D406	M1
D407	J4
D408	L2
D409	K3
D410	K1
D411	M1
D413	J5
D414	M1
D415	K3
DP02	D5
H002	B3
H004	C3
H005	C3
H006	C3
I004	F6
I008	D2

Symbol #	Location
I603	I4
IC401	J2
IC402	L2
IC403	L1
IC404	N2
IP02	E5
IP03	C5
L201	A5
L202	A5
L401	M4
L402	M3
L403	M3
L404	M4
L405	L5
L406	L5
L407	K5
L408	K5
L409	M5
L410	M5
L411	J1
LP02	E6

Symbol #	Location
LP03	C5
LP04	G6
Q002	B3
Q003	C3
Q005	D4
Q201	A4
Q202	A5
Q203	B5
Q204	B5
Q401	L4
Q402	L4
Q403	L3
Q404	M1
Q405	M1
Q406	K3
Q407	J5
QA01	B2
QA02	C2
QP01	E4
X001	D3

PRINTED CIRCUIT BOARD

PT2-E SIGNAL/AUDIO P.W.B. (Side B) *This is a 4 layer board, thus inner layers are not shown, only surface layers.



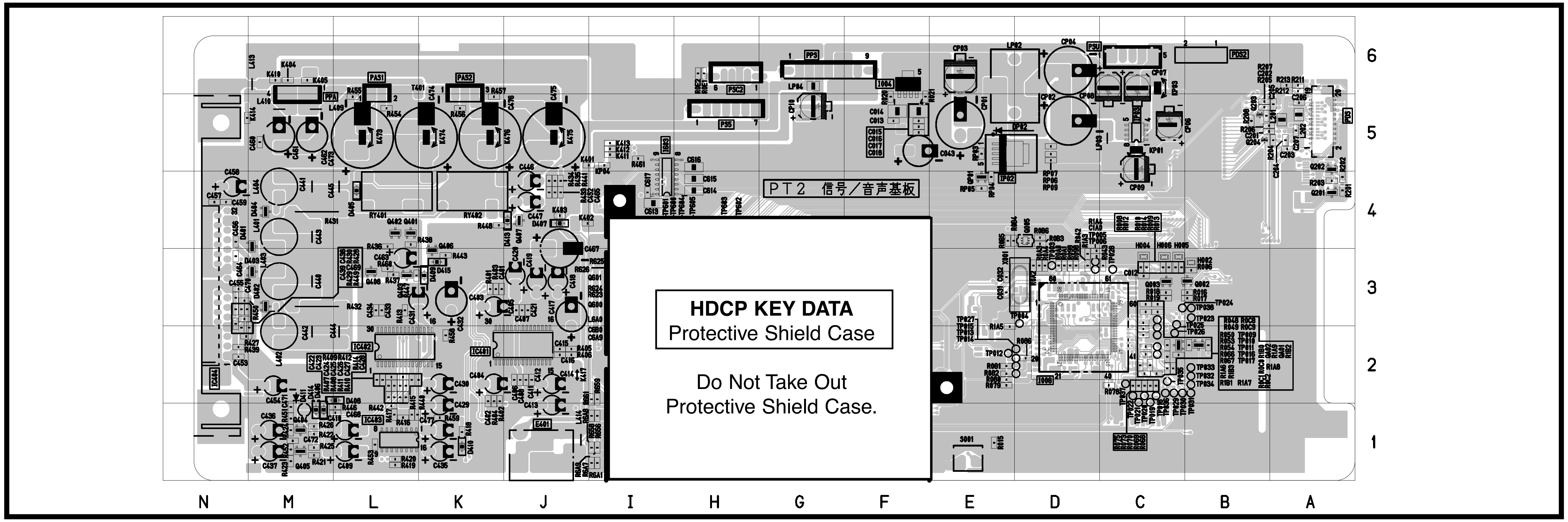
PT2 信号/音声基板
JA03862
1 2 3 4 5 6 7 8
A B C D E F G H
6
5
4
3
2
1
A
B
C
D
E
F
G
H
I
J
K
L
M
N

Component Location Table for PT2-E Signal/Audio P.W.B. (Side B)

Symbol#	Location
D003	E2
D004	D2
D005	D3
I006	C3
I007	D3
I201	A4
I202	A5
L203	A4
L602	H2
L603	H2
L604	G2
Q004	D3
Q006	D2
Q007	C1
Q008	C1
Q009	C1
Q602	H2

PRINTED CIRCUIT BOARD

PT2-G SIGNAL/AUDIO P.W.B. (Side A) *This is a 4 layer board, thus inner layers are not shown, only surface layers.



HDCP KEY DATA
Protective Shield Case
Do Not Take Out
Protective Shield Case.
PT2 信号／音声基板
6
5
4
3
2
1
N
M
L
K
J
I
H
G
F
E
D
C
B
A

Component location tables for PT2-G Signal/Audio P.W.B. (Side A).

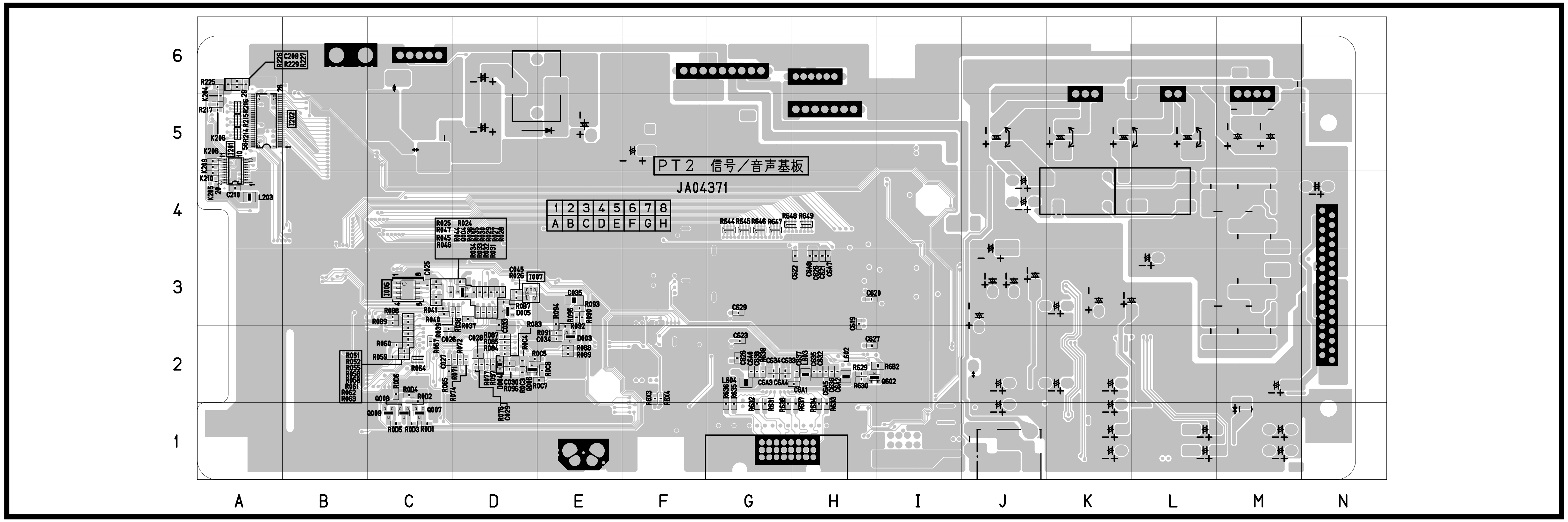
Symbol#	Location
D401	M4
D402	M3
D403	M3
D404	M4
D405	L4
D406	M1
D407	J4
D408	L2
D409	K3
D410	K1
D411	M1
D413	J4
D414	M1
D415	K3
DP02	D5
H002	B3
H004	C3
H005	C3
H006	C3
I004	F6
I008	D2
I603	I4

Symbol#	Location
IC401	J2
IC402	L2
IC403	L1
IC404	N2
IP02	E5
IP03	C5
L201	A5
L202	A5
L401	M4
L402	M3
L403	M3
L404	M4
L409	M5
L410	M5
L413	M6
L414	J1
LP02	E6
LP03	C5
LP04	G6
PDS	A5
Q002	B3
Q003	C3

Symbol#	Location
Q005	D4
Q201	A4
Q202	A5
Q203	B5
Q204	B5
Q401	L4
Q402	L4
Q403	L3
Q404	M1
Q405	M1
Q406	K3
Q407	J4
Q408	L3
QA01	B2
QA02	C2
QP01	E4
X001	D3

PRINTED CIRCUIT BOARD

PT2-G SIGNAL/AUDIO P.W.B. (Side B) *This is a 4 layer board, thus inner layers are not shown, only surface layers.



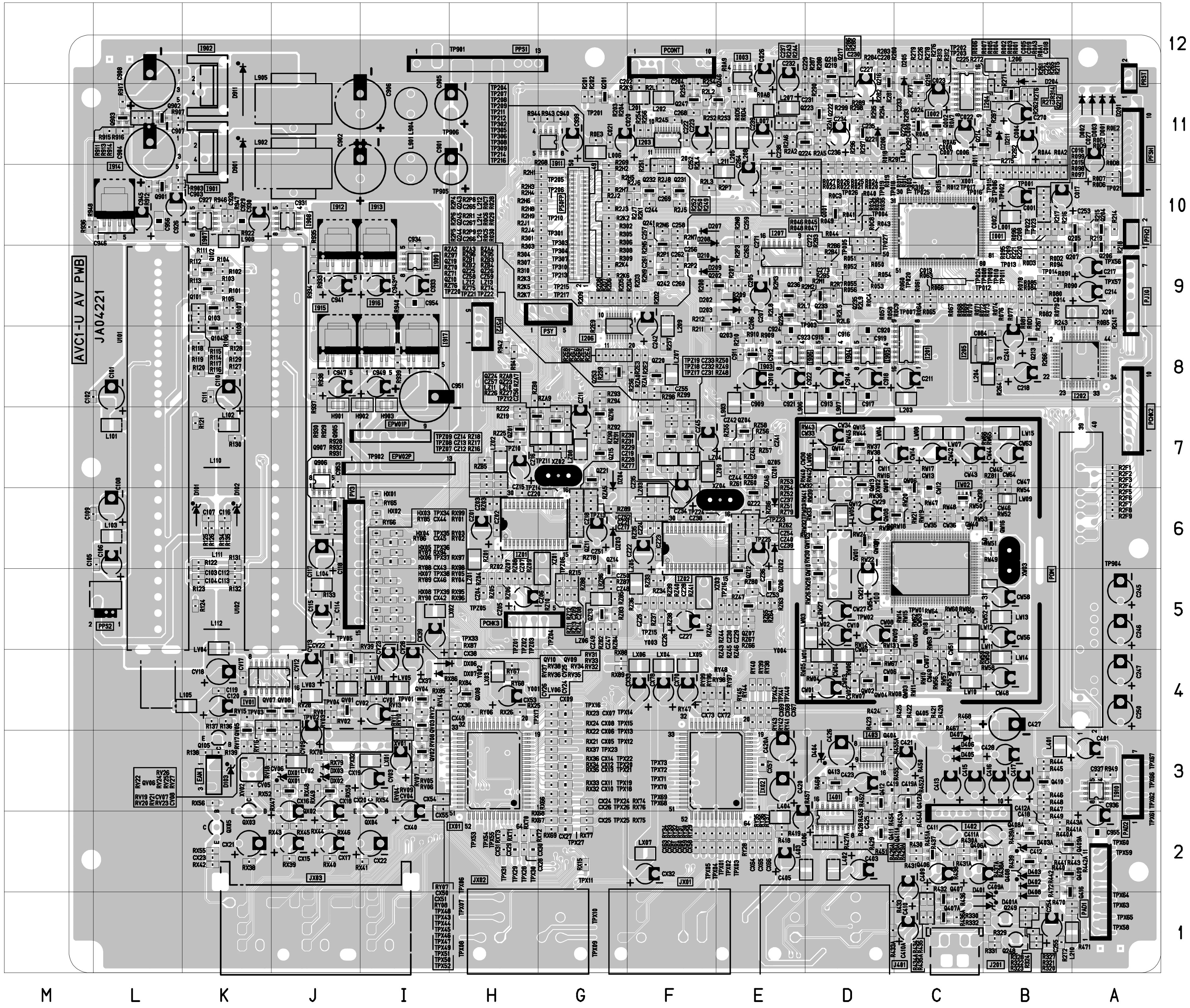
PT2 信号／音声基板
JA04371
1 2 3 4 5 6 7 8
A B C D E F G H
6
5
4
3
2
1
A B C D E F G H I J K L M N

Component location table for PT2-G Signal/Audio P.W.B. (Side B).

Symbol #	Location
D003	E2
D004	D2
D005	D3
I006	C3
I007	D3
I201	A5
I202	A5
L203	A4
L602	H2
L603	H2
L604	G2
Q004	D3
Q006	D2
Q007	C1
Q008	C1
Q009	C1
Q602	H2

PRINTED CIRCUIT BOARD

AVC1-U AV P.W.B. (Side A) *This is a 4 layer board, thus inner layers are not shown, only surface layers.


12
11
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M
L
K
J
I
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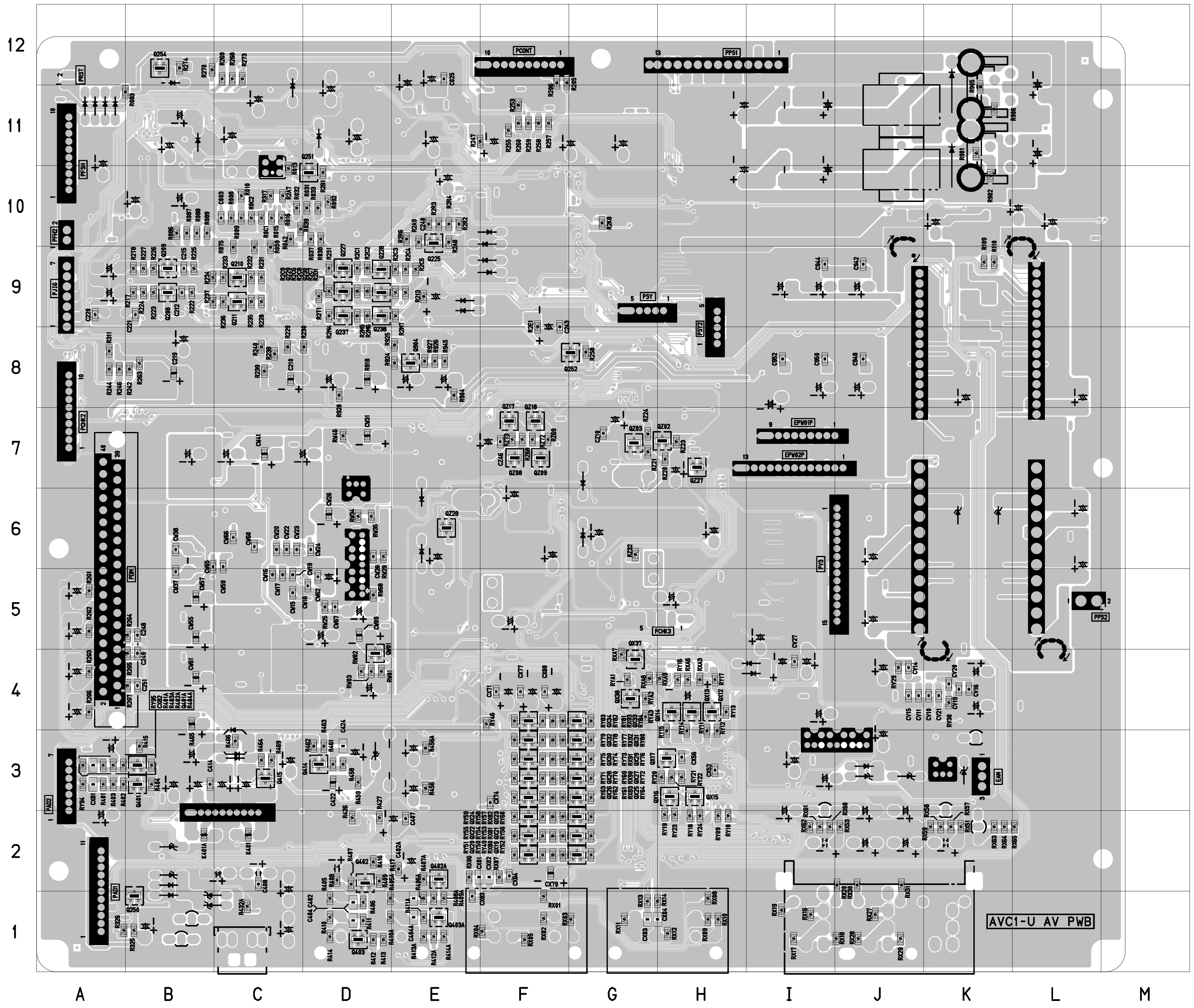
G
F
E
D
C
B
A
AVC1-U AV PWB
JA04221

PRINTED CIRCUIT BOARD

AVC1-U AV P.W.B. (Side B) *This is a 4 layer board, thus inner layers are not shown, only surface layers.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E
F
G
H
I
J
K
L
M
PCONT
PPS1
PSY
PSY2
EPW01P
EPW02P
PCHK3
PPS2
AVC1-U AV PWB

PRINTED CIRCUIT BOARD

Component location tables for AV P.W.B.

AVC1-U AV PWB (Side-A)

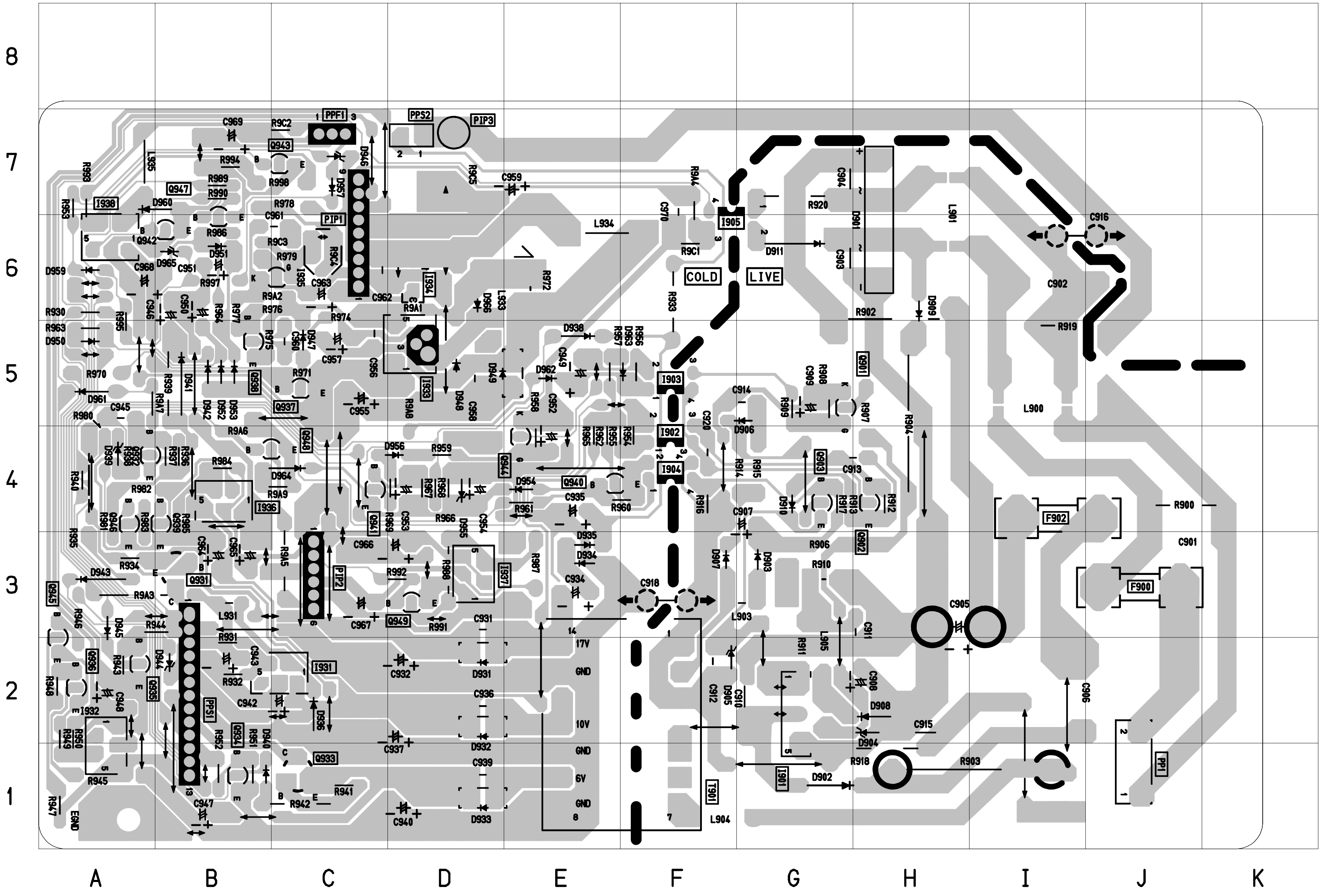
Symbol #	Location	Symbol #	Location	Symbol #	Location	Symbol #	Location	Symbol #	Location	Symbol #	Location	Symbol #	Location	Symbol #	Location
D001	A11	HX01	I6	IX02	F3	LV01	I4	P50FP	G10	Q248	B1	QW07	C6	X201	A9
D002	A11	HX02	I6	IZ01	H6	LV02	J3	Q001	D10	Q249	B1	QW08	C6	XV01	J3
D003	A11	HX03	I6	IZ02	F6	LV03	J4	Q002	C11	Q253	G8	QW09	D6	XV02	K3
D101	K6	HX04	I6	L001	B10	LV04	K5	Q101	K9	Q404	D4	QW10	D5	XW01	D6
D102	K6	HX05	I5	L002	C10	LV05	I4	Q102	K9	Q405	C4	QW11	D6	XW02	D7
D103	K3	HX06	I5	L006	G11	LV06	J4	Q103	K9	Q406	C2	QW12	D6	XW03	B5
D201	A11	HX07	I5	L007	E11	LW01	D4	Q104	K8	Q406A	C2	QW13	D7	XZ01	G5
D202	F9	HX08	I5	L101	L7	LW02	D4	Q105	K3	Q407	C1	QW14	D7	XZ02	G7
D203	F9	I001	C10	L102	K7	LW03	D5	Q201	G11	Q407A	C1	QW15	D7	XZ03	F5
D204	B12	I002	C11	L103	L6	LW04	D7	Q202	E9	Q408	B2	QW16	B6	XZ04	F6
D205	C11	I003	E12	L104	J5	LW05	D6	Q203	E9	Q408A	B2	QW17	C4		
D206	D11	I201	C8	L105	K4	LW06	D7	Q204	A10	Q409	B2	QW18	C5		
D207	E10	I202	A8	L110	K7	LW07	C7	Q205	A10	Q409A	B2	QX01	J3		
D208	F10	I203	F11	L111	K6	LW08	C7	Q206	A9	Q410	B3	QX02	J3		
D209	E9	I204	C11	L112	K5	LW09	B6	Q207	A9	Q411	D2	QX03	K3		
D210	F9	I205	C8	L201	F11	LW10	C4	Q212	B11	Q411A	C2	QX04	J3		
D211	B11	I206	G9	L202	F11	LW11	C5	Q213	B8	Q412	D3	QX05	K2		
D401	C1	I207	E9	L203	C8	LW12	C5	Q214	B11	Q412A	C3	QX08	H4		
D401A	C1	I401	D2	L204	B8	LW13	B5	Q215	C12	Q413	D3	QZ01	H7		
D402	B2	I402	C2	L205	E11	LW14	B4	Q216	D12	Q416	B2	QZ04	E7		
D403	B2	I403	D3	L206	B12	LW15	B7	Q217	D12	Q901	L10	QZ05	E7		
D403A	B2	I901	K11	L207	E11	LX01	I3	Q218	D12	Q902	L11	QZ06	E5		
D404	D3	I902	K11	L208	E11	LX02	I5	Q219	D11	Q903	L11	QZ07	E5		
D405	C3	I903	E8	L209	F9	LX03	H4	Q220	D11	Q905	J6	QZ10	F7		
D406	C3	I904	D8	L210	B1	LX04	F4	Q221	D11	Q906	J7	QZ11	G6		
D407	C3	I905	D8	L211	E10	LX05	F4	Q222	D11	Q907	J6	QZ12	E5		
D408	B1	I906	E8	L212	E10	LX06	F4	Q223	E11	QV01	J4	QZ13	G5		
D901	K10	I907	K10	L213	E10	LX07	F2	Q224	E11	QV02	I3	QZ14	G5		
D911	K11	I908	J10	L214	E10	LZ01	H6	Q231	F10	QV03	I4	QZ15	G7		
DX01	J3	I909	I9	L401	B3	LZ02	H7	Q232	F10	QV04	I4	QZ16	G7		
DX02	J3	I910	A3	L402	D2	LZ03	F6	Q233	D9	QV05	K4	QZ19	F7		
DX03	J3	I911	G11	L403	D2	LZ04	E7	Q234	E9	QV06	K4	QZ20	F8		
DX06	I4	I912	J9	L404	E2	LZ05	F5	Q235	D9	QV07	K4	QZ21	G7		
DX07	H4	I913	I9	L901	I10	LZ06	G5	Q236	E9	QV08	J4	QZ22	E6		
DZ01	E7	I914	L10	L902	J10	LZ07	F8	Q241	F10	QV09	J4	QZ23	G7		
DZ02	E6	I915	J8	L903	E8	LZ08	G7	Q242	F9	QV10	J4	QZ24	H7		
DZ03	G6	I916	I8	L904	I11	LZ09	F7	Q243	E10	QW02	D4	QZ25	F7		
DZ04	G7	I917	I8	L905	J11	LZ10	G7	Q244	E10	QW03	C4	QZ26	F7		
H901	J8	IV01	K4	L906	D8	LZ11	G7	Q245	E10	QW04	D4	U101	L5		
H902	I8	IW02	C6	L907	D8	LZ12	F7	Q246	E11	QW05	C5	U102	J5		
H903	I8	IX01	H3	L908	K10	LZ13	F7	Q247	F11	QW06	C7	X001	C10		

AVC1-U AV PWB (Side-B)

Symbol #	Location	Symbol #	Location
Q208	B9	QX29	G3
Q209	B9	QX30	F3
Q210	C9	QX31	G3
Q211	C9	QX32	F3
Q225	E10	QX33	G4
Q227	D9	QX34	F4
Q228	D9	QX37	G4
Q229	D9	QX38	G4
Q230	D9	QZ02	H7
Q237	D9	QZ03	G7
Q238	D9	QZ08	F7
Q250	B1	QZ09	F7
Q251	D10	QZ17	F7
Q252	G8	QZ18	F7
Q254	B12	QZ27	H7
Q401	B3	QZ28	E6
Q401A	B3		
Q402	D2		
Q402A	E2		
Q403	D1		
Q403A	E1		
Q414	D3		
Q415	C3		
Q904	E8		
QW01	D4		
QX12	H4		
QX13	H4		
QX14	H4		
QX15	H3		
QX16	H3		
QX17	H3		
QX19	G2		
QX20	F2		
QX21	G2		
QX22	F2		
QX23	G2		
QX24	F2		
QX25	G3		
QX26	F3		
QX27	G3		
QX28	F3		

PRINTED CIRCUIT BOARD

AVC1-U POWER P.W.B.



8
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A
B
C
D
E
F
G
H
I
J
K
PPF1
PPS2
PIP3
PIP1
PIP2
PPS1
PP1
COLD
LIVE
I901
I902
I903
I904
I905
I931
I933
I934
I936
I937
I938
T901
F900
F902
L900
L901
L903
L904
L905
L931
L933
L934
L935
Q931
Q933
Q937
Q940
Q943
Q947
Q949
C901
C902
C905
C906
C915
C916
C918
R900
R902
R903
R919
R920
17V
GND
10V
6V
EGND

Component location table for AVC1-U Power P.W.B.

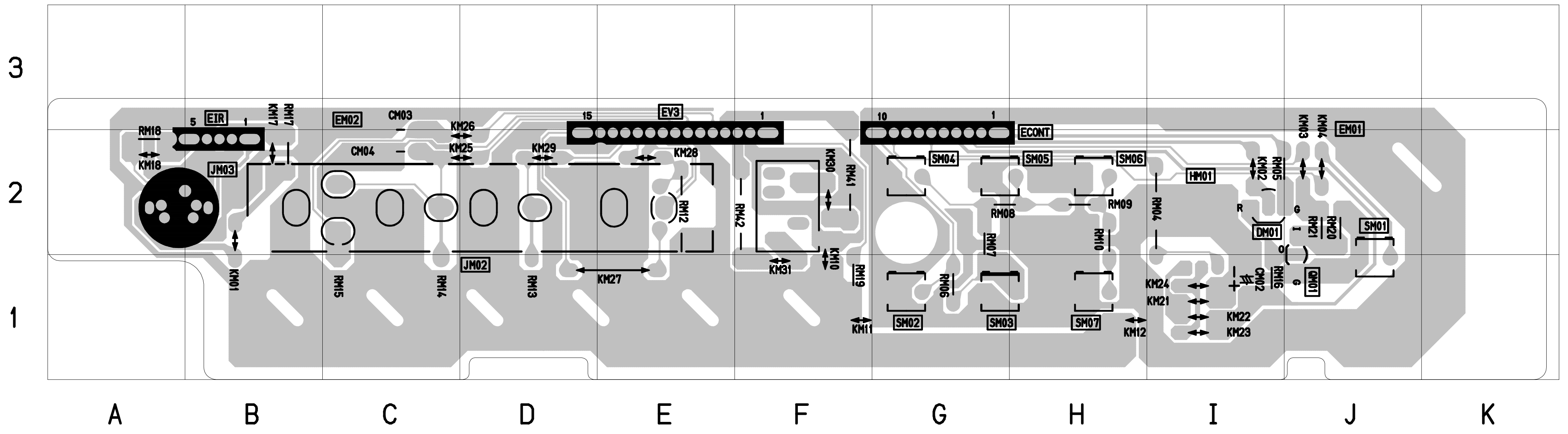
Symbol #	Location
D901	H6
D902	G1
D903	G3
D904	H2
D905	F2
D906	G5
D907	F3
D908	H2
D909	H6
D910	G4
D911	G6
D931	D2
D932	D2
D933	D1
D934	E3
D935	E3
D936	C2
D938	E5
D939	A4
D940	B1
D941	B5
D942	B5
D943	A3
D944	B2
D945	A3
D946	C7
D947	C5
D948	D5
D949	D5
D950	A5
D951	B6
D952	B5
D953	B5
D954	E4
D955	D4
D956	C4
D957	C7
D959	A6

Symbol #	Location
D960	B7
D961	A5
D962	E5
D963	F5
D964	B4
D965	A6
D966	D6
I901	G2
I902	F4
I903	F5
I904	F4
I905	F6
I931	C2
I932	A1
I933	D5
I934	D6
I935	C6
I936	B4
I937	E3
I938	A7
L900	I4
L901	I7
L903	G3
L904	G1
L905	G2
L931	B3
L933	D6
L934	F6
L935	A7
Q901	G5
Q902	H4
Q903	G4
Q931	B3
Q932	A4
Q933	C1
Q934	B1
Q935	A2
Q936	A2

Symbol #	Location
Q937	C5
Q938	B5
Q939	B3
Q940	F4
Q941	C4
Q942	B6
Q943	C7
Q944	E4
Q945	A2
Q946	A3
Q947	B6
Q948	C4
Q949	D3

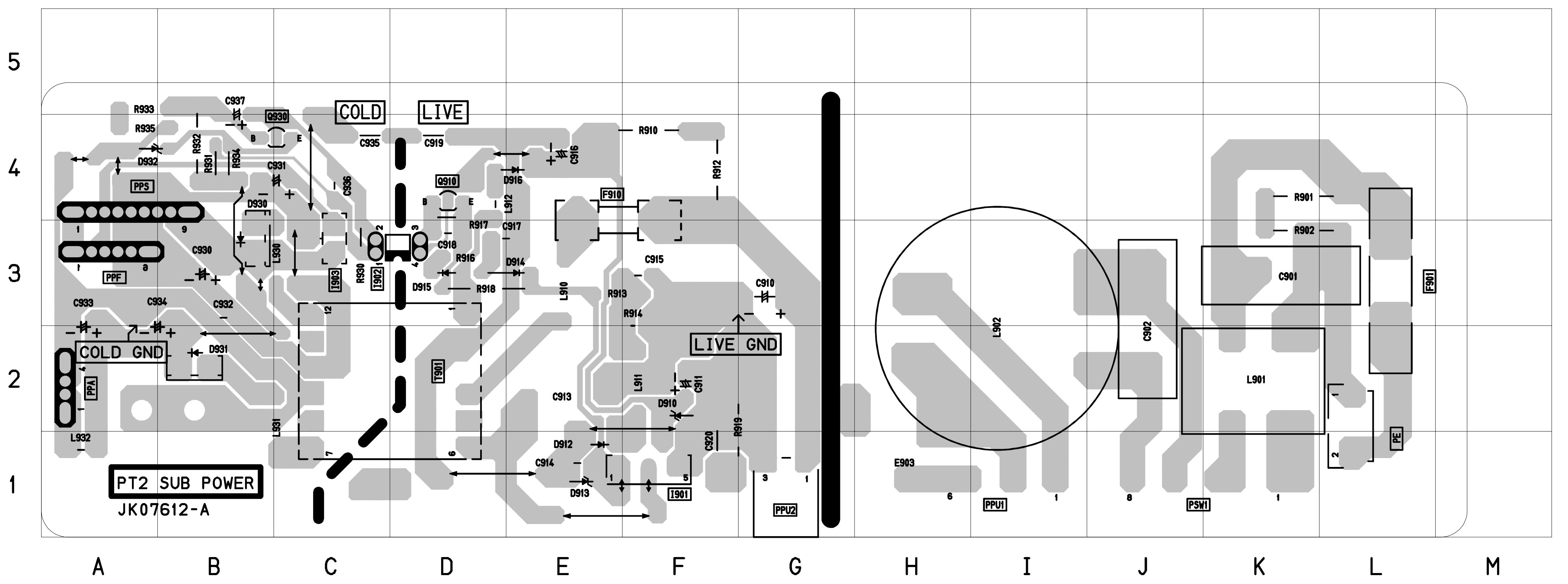
PRINTED CIRCUIT BOARD

AVC1-U CONTROL P.W.B.


3
2
1
A
B
C
D
E
F
G
H
I
J
K
RM18
KM18
EIR
5
1
KM17
RM17
JM03
KM01
EM02
CM03
CM04
KM26
KM25
KM29
RM15
RM14
JM02
RM13
KM27
15
EV3
1
KM28
RM12
RM42
KM30
RM41
KM31
KM10
RM19
KM11
10
1
ECONT
SM04
SM05
SM06
RM08
RM09
RM07
RM10
RM06
SM02
SM03
SM07
RM04
HM01
KM24
KM21
KM22
KM23
KM12
CM02
KM02
RM05
KM03
KM04
EM01
R
G
I
O
G
DM01
RM21
RM20
RM16
QM01
SM01

PRINTED CIRCUIT BOARD

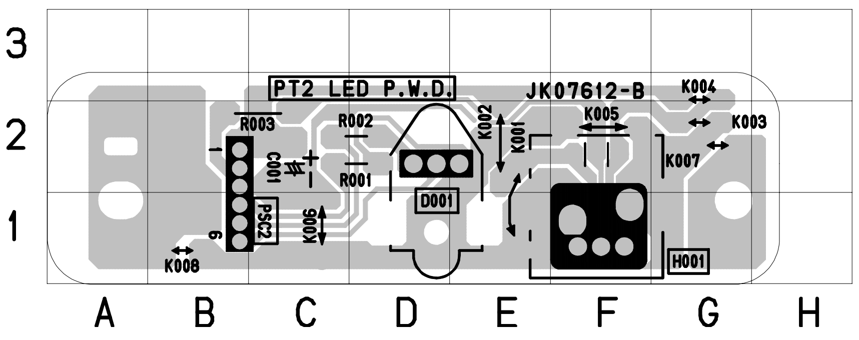
PT2-E POWER/FILTER P.W.B.


5
4
3
2
1
A
B
C
D
E
F
G
H
I
J
K
L
M
COLD
LIVE
R933
R935
C937
Q930
R932
R931
R934
D932
C931
PPS
D930
C936
C935
C919
Q910
D916
C916
R910
R912
F910
L912
R917
C917
C918
R916
D914
D915
R918
C930
PPF
L930
I903
R930
I902
T901
C915
L910
R913
R914
C910
LIVE GND
C933
C934
C932
COLD GND
D931
PPA
L932
L931
C913
L911
C911
D910
C920
R919
D912
C914
D913
I901
PPU2
PT2 SUB POWER
JK07612-A
R901
R902
C901
F901
L902
C902
L901
PE
E903
PPU1
PSW1

Component location table for PT2-E Power/Filter P.W.B.

Symbol #	Location
D910	F2
D912	E1
D913	E1
D914	D3
D915	D3
D916	D4
D930	B3
D931	B2
D932	A4
I901	F1
I902	D3
I903	C3
L901	K2
L902	I2
L910	E3
L911	F2
L912	D4
L930	C3
L931	C1
L932	A1
Q910	D4
Q930	C4

PT2-E LED P.W.B.

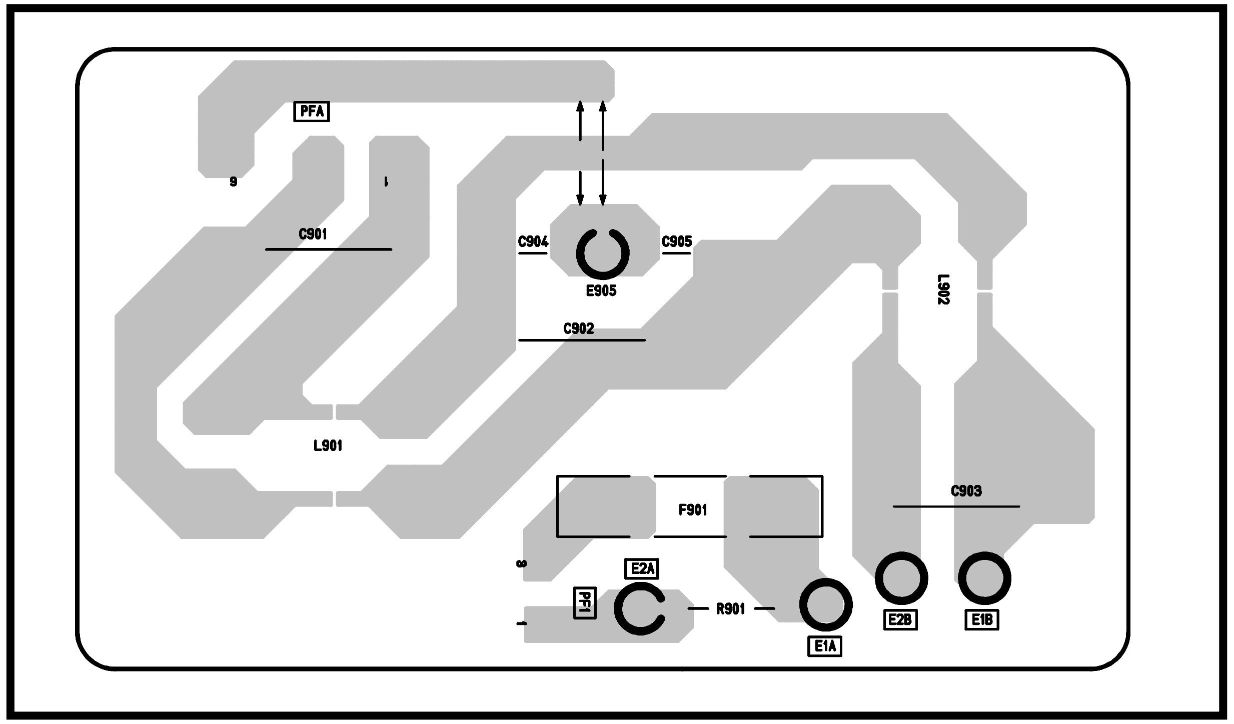

3
2
1
A
B
C
D
E
F
G
H
PT2 LED P.W.D.
JK07612-B
K004
K005
K003
K002
K001
K007
R003
R002
R001
C001
D001
PSC2
K006
K008
H001

Component location table for PT2-E LED P.W.B.

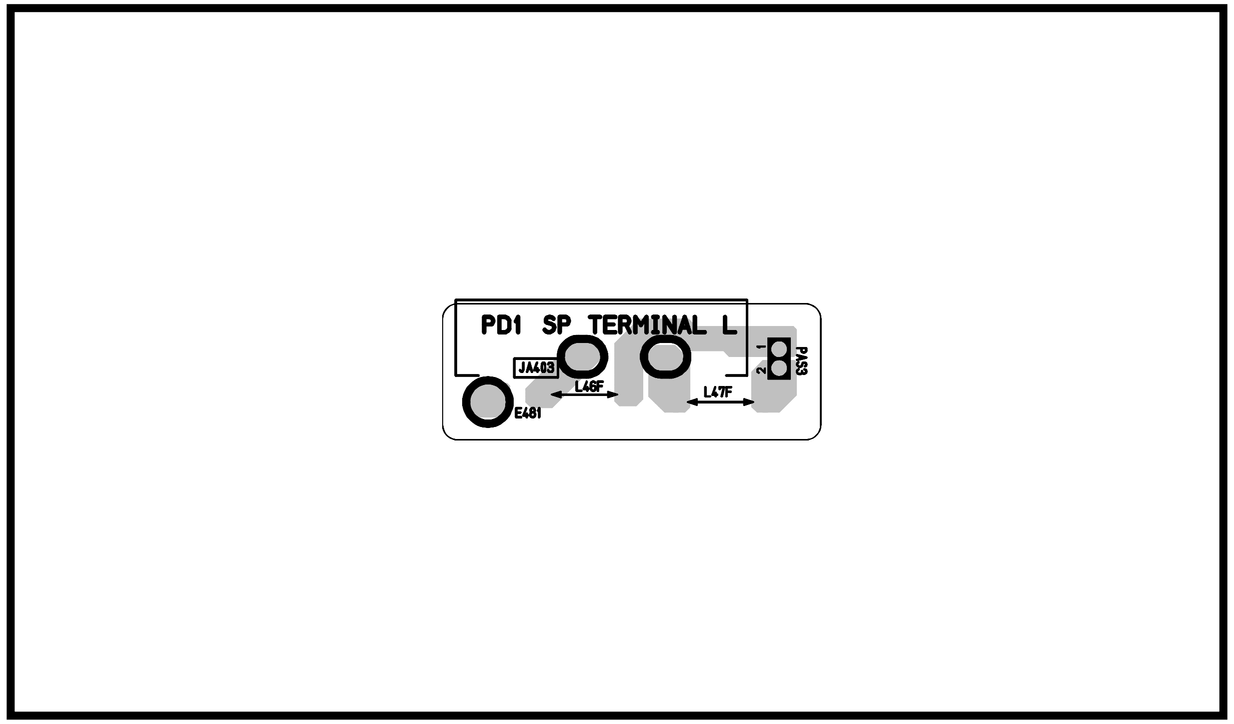
Symbol #	Location
C001	C2
D001	D1
H001	F1

PRINTED CIRCUIT BOARD

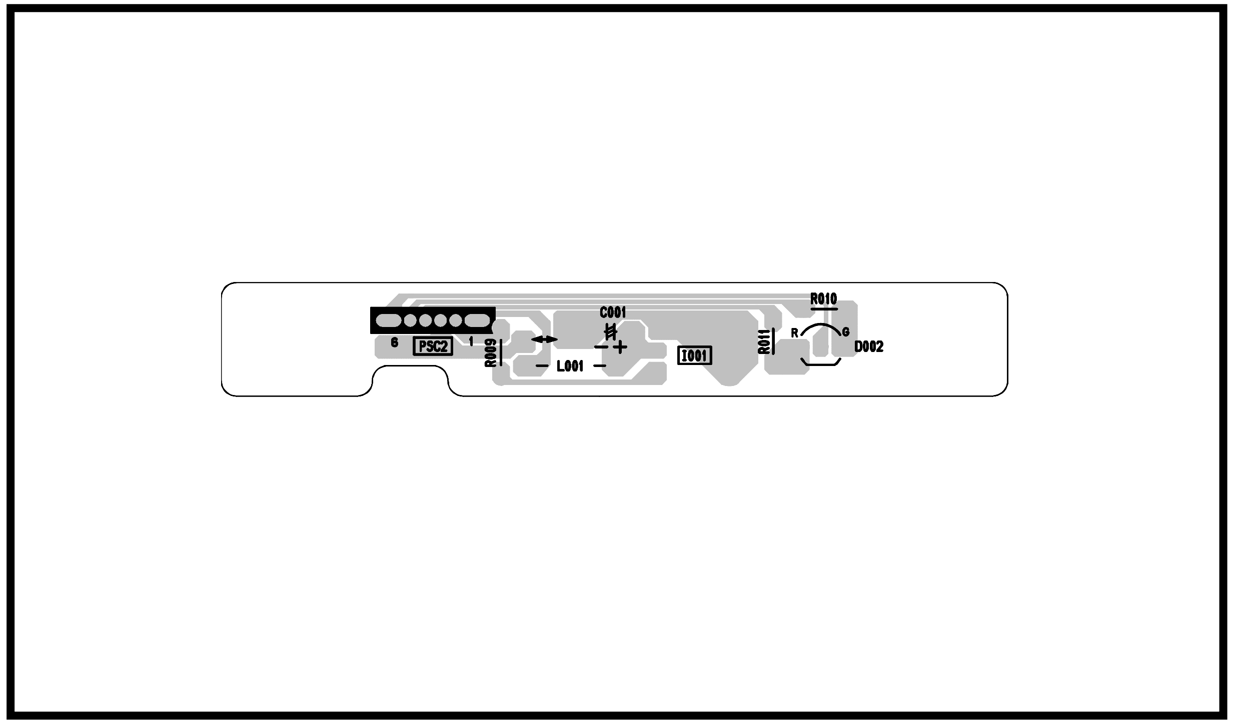
PT2-G FILTER P.W.B.


PFA
9
1
C901
C904
C905
E905
C902
L902
L901
F901
C903
3
E2A
PF1
R901
E1A
E2B
E1B
1

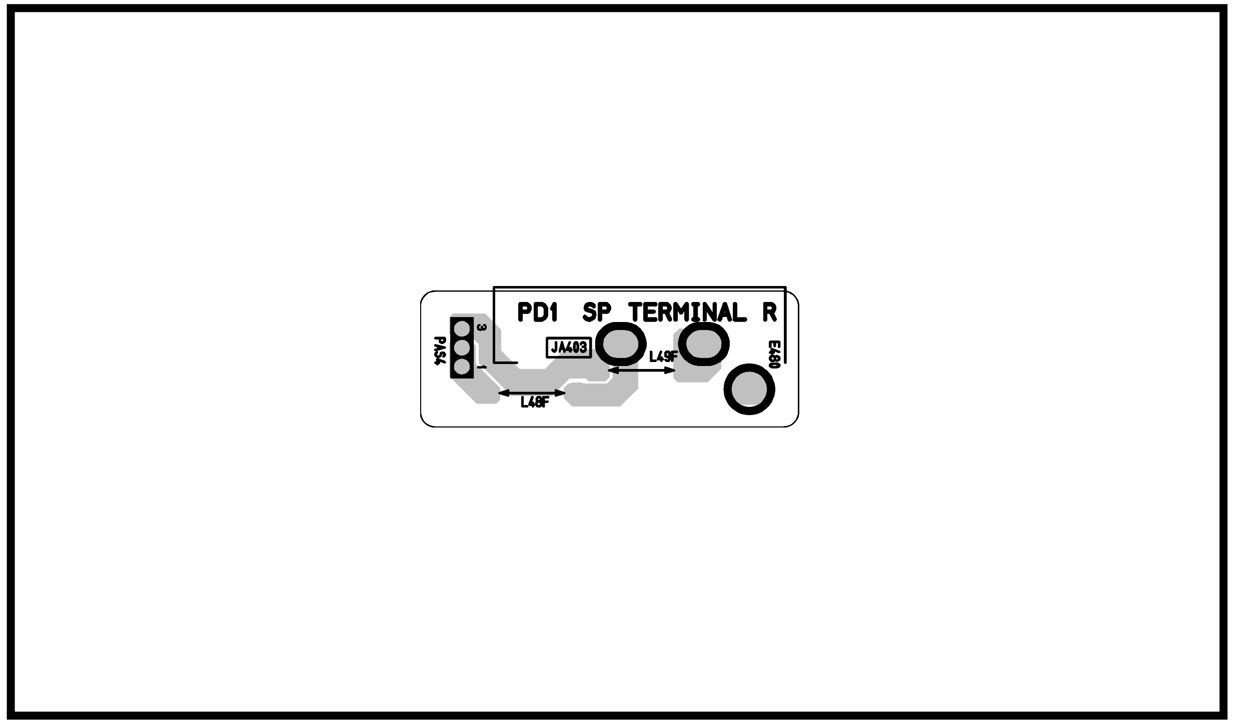
PT2-G SP TERMINAL L P.W.B.


PD1 SP TERMINAL L
JA403
L46F
L47F
E481
1
2
PAS3

PT2-G LED P.W.B.

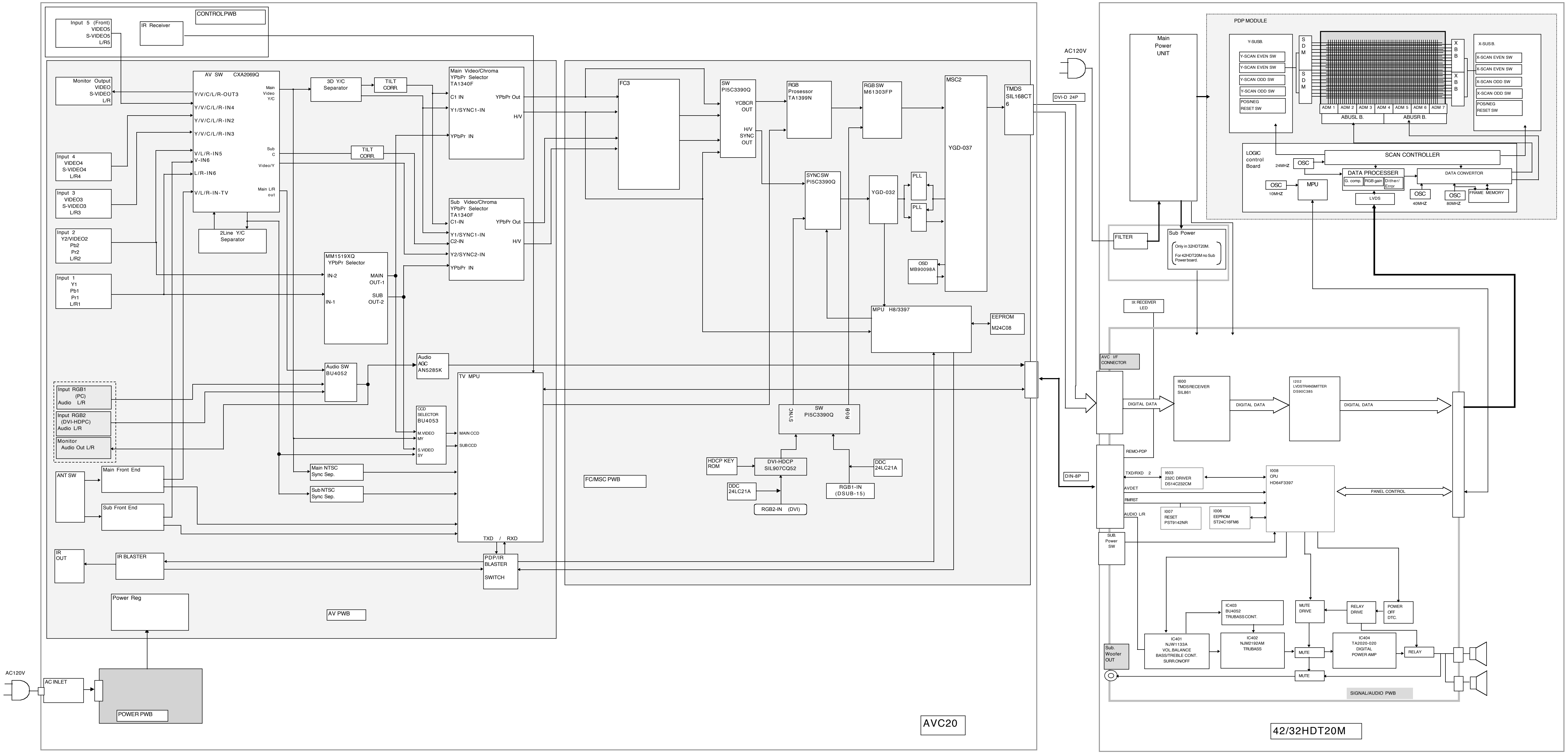

6
PSC2
1
R009
C001
L001
I001
R011
R010
R
G
D002

PT2-G TERMINAL R P.W.B.


PD1 SP TERMINAL R
3
1
PAS4
JA403
L49F
L48F
E480

BLOCK DIAGRAM

AVC20 - 32/42HDT20M


CONTROL PWB
Input 5 (Front) VIDEO5 S-VIDEO5 L/R5
IR Receiver
Monitor Output VIDEO S-VIDEO L/R
AV SW CXA2069Q
Y/V/C/L/R-OUT3
Y/V/C/L/R-IN4
Y/V/C/L/R-IN2
Y/V/C/L/R-IN3
V/L/R-IN5
V-IN6
L/R-IN6
V/L/R-IN-TV
Main Video Y/C
Sub C
Video/Y
Main L/R out
2Line Y/C Separator
3D Y/C Separator
TILT CORR.
TILT CORR.
Main Video/Chroma YPbPr Selector TA1340F
C1 IN
Y1/SYNC1-IN
YPbPr IN
YPbPr Out
H/V
Sub Video/Chroma YPbPr Selector TA1340F
C1-IN
Y1/SYNC1-IN
C2-IN
Y2/SYNC2-IN
YPbPr IN
YPbPr Out
H/V
Input 4 VIDEO4 S-VIDEO4 L/R4
Input 3 VIDEO3 S-VIDEO3 L/R3
Input 2 Y2/VIDEO2 Pb2 Pr2 L/R2
Input 1 Y1 Pb1 Pr1 L/R1
MM1519XQ YPbPr Selector
IN-2
IN-1
MAIN OUT-1
SUB OUT-2
Audio SW BU4052
Audio AGC AN5285K
TV MPU
CCD SELECTOR BU4053
M.VIDEO MY
S.VIDEO SY
MAIN CCD
SUB CCD
Input RGB1 (PC) Audio L/R
Input RGB2 (DVI-HDPC) Audio L/R
Monitor Audio Out L/R
ANT SW
Main Front End
Sub Front End
Main NTSC Sync Sep.
Sub NTSC Sync Sep.
TXD / RXD
IR OUT
IR BLASTER
PDP/IR BLASTER SWITCH
Power Reg
AV PWB
AC120V
AC INLET
POWER PWB
FC3
SW PI5C3390Q
YCBCR OUT
H/V SYNC OUT
RGB Prosessor TA1399N
RGB SW M61303FP
MSC2
YGD-037
TMDS SIL168CT6
SYNC SW PI5C3390Q
YGD-032
PLL
PLL
OSD MB90098A
MPU H8/3397
EEPROM M24C08
SW PI5C3390Q
SYNC
RGB
HDCP KEY ROM
DVI-HDCP SIL907CQ52
DDC 24LC21A
DDC 24LC21A
RGB2-IN (DVI)
RGB1-IN (DSUB-15)
FC/MSC PWB
AVC20
AC120V
DVI-D 24P
DIN-8P
Main Power UNIT
PDP MODULE
Y-SUSB.
Y-SCAN EVEN SW
Y-SCAN EVEN SW
Y-SCAN ODD SW
Y-SCAN ODD SW
POS/NEG RESET SW
SDM
SDM
ADM 1
ADM 2
ADM 3
ADM 4
ADM 5
ADM 6
ADM 7
ABUSL B.
ABUSR B.
XBB
XBB
X-SUS B.
X-SCAN EVEN SW
X-SCAN EVEN SW
X-SCAN ODD SW
X-SCAN ODD SW
POS/NEG RESET SW
LOGIC control Board
24MHZ
OSC
SCAN CONTROLLER
DATA PROCESSER
G. comp.
RGB gain
Dither/Error
DATA CONVERTOR
OSC
10MHZ
MPU
LVDS
OSC
40MHZ
OSC
80MHZ
FRAME MEMORY
FILTER
Sub Power
Only in 32HDT20M.
For 42HDT20M no Sub Power board.
IR RECEIVER LED
AVC I/F CONNECTOR
DIGITAL DATA
I600 TMDS RECEIVER SIL861
DIGITAL DATA
I202 LVDS TRANSMITTER DS90C385
DIGITAL DATA
REMO-PDP
TXD/RXD 2
I603 232C DRIVER DS14C232CM
AVDET
RMRST
AUDIO L/R
I007 RESET PST9142NR
I006 EEPROM ST24C16FM6
I008 CPU HD64F3397
PANEL CONTROL
SUB. Power SW
IC403 BU4052 TRUBASS CONT.
MUTE DRIVE
RELAY DRIVE
POWER OFF DTC.
IC401 NJW1133A VOL.BALANCE BASS/TREBLE CONT. SURR.ON/OFF
IC402 NJM2192AM TRUBASS
MUTE
IC404 TA2020-020 DIGITAL POWER AMP
RELAY
Sub. Woofer OUT
MUTE
SIGNAL/AUDIO PWB
42/32HDT20M

AVC20 – block diagram explanation.

Control PWB:

HM01	**GP1U281RIR**	**Infrared receiver** supply voltage = +5V
DM01	**SPR-54MVW**	**Red and Green LED**

AV PWB:

EANT	**Antenna switch**	Selection of source antenna between A and B antenna inputs. When B antenna is selected, "To converter" output bypasses A antenna. Supply voltage = + 9V.
U101	**ENGE6106D**	**FRONT END, MAIN tunner** Supply voltage = +5V(pin 7), +9V(pin 13), +30V(pin 9). Input signal: RF signal; Output signal: composite video signal, L/R audio. Mute control for antenna audio signal, SAP detect signal, Stereo detect signal. Control through I^{2}C bus, SDA at pin 5 and SCLK at pin 4.
U102	**ENGE36614G**	**Front End, SUB tunner** Supply voltage = +5V(pin 7), +9V(pin 13), +30V(pin 9). Input: RF signal; Output: composite video signal for sub picture. Control through I^{2}C bus, SDA at pin 5 and SCLK at pin 4.
IX01	**CXA2069Q**	**Audio and Video Switch** Supply voltage: +9V at pin 42. Input signal: composite video signals Main video, Sub video input 2 through input 5. Main L/R and Sub L/R audio signals, input 1 through input 5 audio signals. Outputs: Monitor Video, audio L/R, and Y(Luma)/V(Video) and C(Chroma) and L/R signals for main and sub pictures for 3DY/C separator and 2line Y/C separator stage. Controlled by I^{2}C, SDA pin 34, SCLK pin 33.
IW01	**uPD64083GF**	**3D-Y/C separator** Supply voltage: +2.5V(pin 31, 32, 45, 46, 53, 64, 81, 92, 93, 100) +3.3V(pin 38). Input signal: Main Y/V (Luminance/Video), main chroma, main sync. Output signals: MY (Main Luminance), and MC (Main Chroma). Controlled by I^{2}C, SDA pin 60, SCLK pin 69.
IV01	**TC90A45F**	**2Line Y/C separator** Supply voltage = +5V (pin 8, 16). Input signal: Sub video signal (pin 4). Output signals: SY (Sub luminance; pin 15), SC (Sub chroma; pin 13).
IX02	**MM1519XQ**	**YPBPR selector** Supply voltage = +5V (pin 28), +9V (pin 4, 14, 39, 45, 51, 52, 58). Input signals: Input1 YPBPR, Input 2 YPBPR signals. Output signals: Main and sub YPBPR signals. Controlled by I^{2}C, SDA pin 26, SCLK pin 27.
IZ02	**TA1340F**	**Main Video/Chroma YPBPR switch** Supply voltage = +9V (pin 1), +5V (pin 25). Input signals: Main luminance and main chroma signals from IW01, and Main YPBPR signals from IX02. Output signals: Main YPBPR signals and main Horizontal and Vertical Sync signals. Clock signal for 3D Y/C separator. Controlled by I^{2}C, SDA pin 13, SCLK pin 14.
IZ01	**TA1340F**	**Sub Video/Chroma YPBPR switch** Supply voltage = +9V (pin 1), +5V (pin 25). Input signals: Sub luminance and sub chroma signals from IX01, MY and MC from IW01 and sub YPBPR signals from IX02. Output signals: Sub YPBPR signals and sub Horizontal and Vertical Sync signals. Clock signal for 2line Y/C separator. Controlled by I^{2}C, SDA pin 13, SCLK pin 14.
I401	**BU4052BCF**	**Audio switch** Supply voltage = +9V pin 16. Input signals: L/R audio signals from IX01 AV switch and L/R from RGB1(D-sub15) and RGB2(DVI) inputs. Output signal: the selected audio from main picture source. Controlled from output port pins from main micon. Signal names: A. SEL 1 and A. SEL 2

A. SEL 1	A. SEL 2	L/R OUT
H	H	IX01 L/R
L	H	Not Used
H	L	RGB1 L/R
L	L	RGB2 L/R

I402	**AN5285K**	**Audio AGC (Automatic Gain control)** Supply voltage = +9V (pin 4). Input signal = L/R out from I401. Output signal = same audio signal but gain controlled. Controlled directly by the micon through line A. AGC.
I403	**BA3530FS**	**Headphone Amplifier and Volume control** Supply voltage = +9V (pin 9). Input signal: L/R audio channels from I402. Output signal: L/R audio signals for headphone output on the front panel of the AVC20. Controlled by micon signal HP. VOL and POWER1.
I201	**BU4053BCF**	**CCD Selector** Supply voltage = +9V (pin 16). Input signal: MY and SY (from YPBPR selector IX02) and Mvideo and Svideo from AV switch IX01. Output signal: Main and Sub Y signals for CCD decoding by the main micon. Controlled by micon signals SUB CCD SEL and MAIN CCD SEL.

I001	**M306V3FGFP**	**Main microcontroller unit** Supply voltage = +3.3V(pin 16), +5V(pin 99). As the I^{2}C bus master, it controls most of the functions of the AVC20. Closed caption decoding, On Screen Display generation (for TV mode not RGB mode), tunner control, IR blaster control, FC/MSC unit enable and disable signaling and remote control signal decoding besides other functions.
I204	**BU4053BCF**	**PDP/IR blaster selector** Supply voltage = +5V (pin 16). Input signals: PDP TXD/RXD and IR blaster IC TXD/RXD signals. Output signal: One of the TXD/RXD signals of the selected device. Controlled by PDP IR BLATER SEL signal from I001.
I202	**S3C80F7**	**IR blaster MCU** Supply voltage = +3.3V (pin 5). Input signals: TXD/RXD micon signals for the AVNET control word. Output signal: Drive signal for the IR mouse from pin 4. Controlled by the same TXD/RXD signals from I001.

AV PWB Power block:

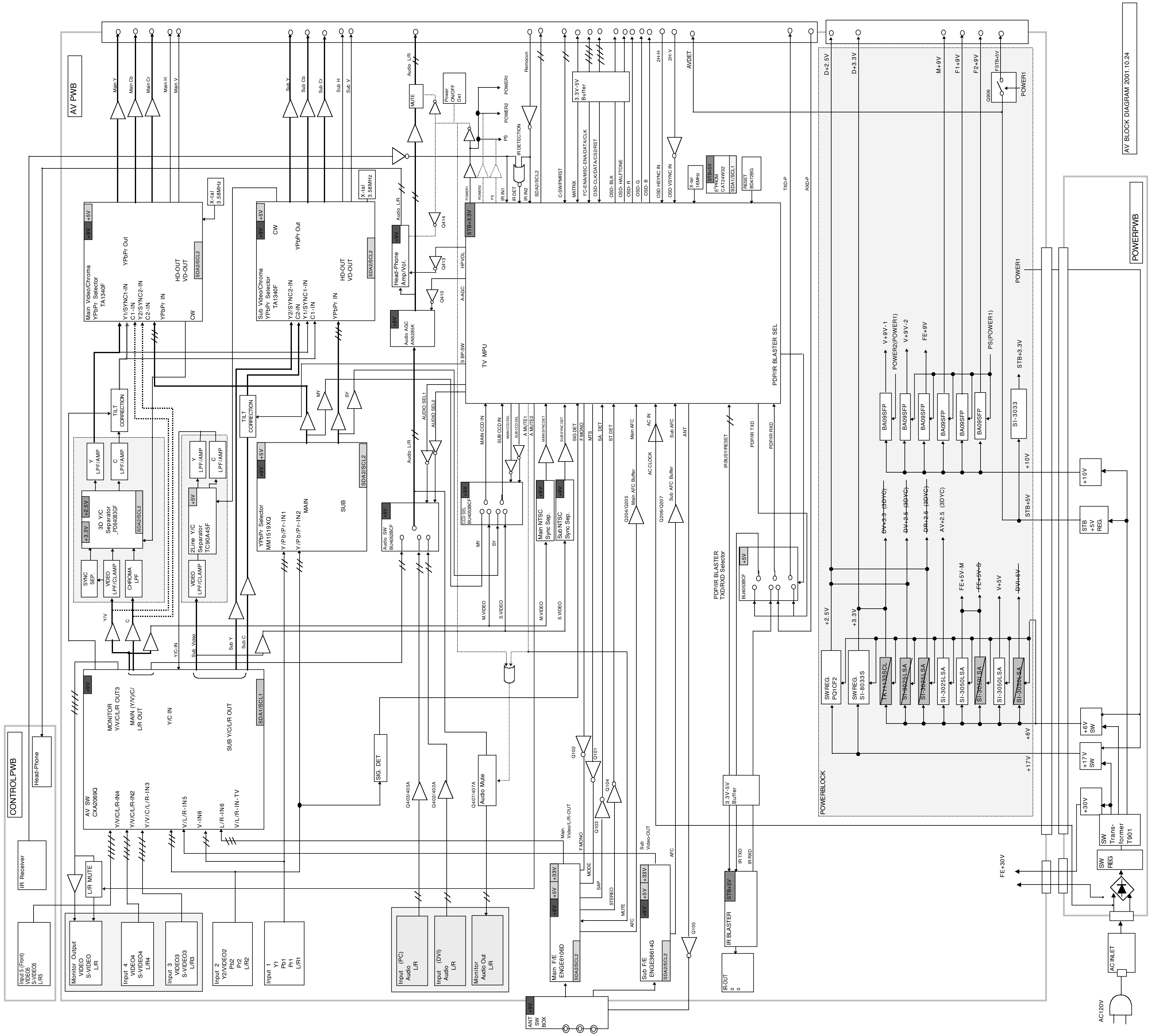
I901	**PQ1CF2**	**Switched Voltage Regulator** Supply voltage = +17V (pin 1) Input signal: +17V dc level. Output signal: +2.5V regulated dc level. Controlled at pin 5 by POWER1 signal from main micon.
I902	**SI8033S**	**Switched Voltage Regulator** Supply voltage = +17V (pin 1) Input signal: +17V dc level. Output signal: +3.3V regulated dc level. Controlled at pin 5 by POWER1 signal from main micon.
I906	**SI-3025LSA**	**Voltage Regulator** Supply voltage = +6V (pin 1, 3). Input signal: +6V dc level. Output signal: +2.5V regulated dc level. Controlled at pin 4 by presence of +6V input voltage.
I907 **I909**	**SI-3050LSA**	**Voltage Regulator** Supply voltage = +6V (pin 1, 3). Input signal: +6V dc level. Output signal: +5V regulated dc level. Controlled at pin 5 by presence of +6V input voltage.
I912 **I913** **I914** **I915** **I916** **I917**	**BA09SFP**	**Controlled linear Voltage Regulator** Supply voltage = +10V (pin 2). Input signal: +10V dc level. Output signal: +9V regulated dc level. Controlled at pin 1 by presence of POWER1 signal from main micon.
I911	**SI-3033LSA**	**Voltage Regulator** Supply voltage = +5V (pin 1, 3). Input signal: +5V dc level. Output signal: +3.3V regulated dc level. Controlled at pin 4 by presence of +5V input voltage.

Power PWB:

J901	**GL-2100C**	**AC inlet(with noise filter)**
D901	**D3SB(A)60**	**Rectifier bridge**
I901	**STR-F6676**	**Hybrid IC, switching regulator** Supply voltage = STB+14.3V / SW+16.5V (pin 5). Input signal: Over current protection and Feedback signal, pin 1. Output signal: Switch drive for T901 transformer primary coil. Controlled by supply voltage.
T901	**PT-EE39F13J-A7**	**Switch mode transformer** Driven by I901 switch, it yields +6V, +10V, +17V, and +30V for the tunners.
I902 **I903** **I904**	**TLP421F**	**Optoisolator IC** Input signal: sense signals from +10V T901 source and POWER1 signal from main micon. Output signal: feedback signals to I901 for voltage regulation and over current protection.
I931	**SI-8050E**	**Voltage Regulator** Supply voltage = +10V (pin 1). Input signal: +10V dc level. Output signal: STB+5V regulated dc level. Not controlled, start at AC plug in.

BLOCK DIAGRAM

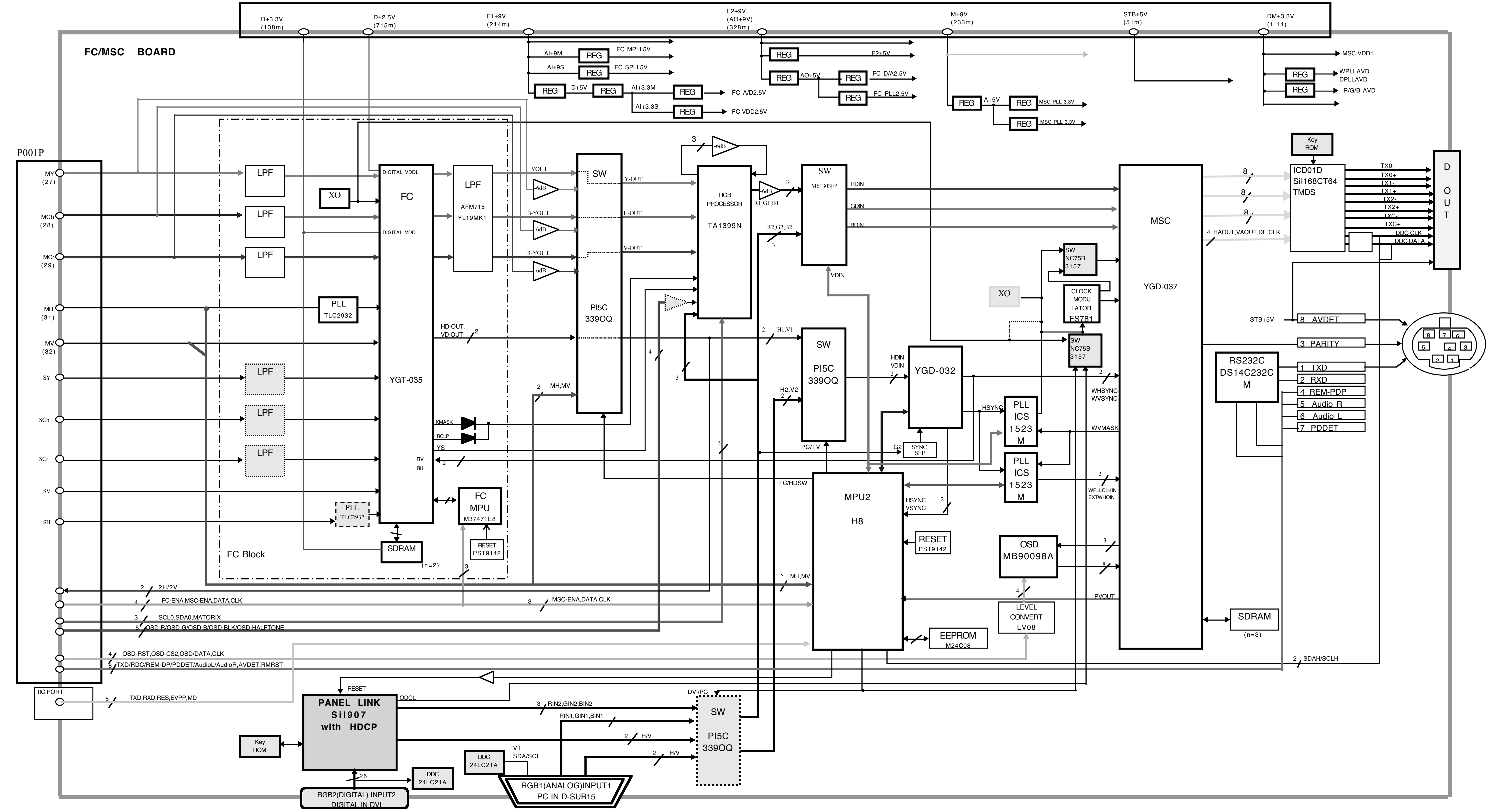
A/V BOARD


AV PWB
CONTROLPWB
POWERPWB
POWERBLOCK
AV BLOCK DIAGRAM 2001.10.24
Main Video/Chroma YPbPr Selector TA1340F
Sub Video/Chroma YPbPr Selector TA1340F
TV MPU
PDP/IR BLASTER SEL
AV SW CXA2069Q
YPbPr Selector MM1519XQ
3D Y/C Separator
2Line Y/C Separator TC90A45F
TILT CORRECTION
Head-Phone Amp/Vol.
Audio AGC AN5285K
Audio SW
Main NTSC Sync Sep.
Sub NTSC Sync Sep.
SIG. DET
Audio Mute
L/R MUTE
IR Receiver
Head-Phone
Main F/E ENGE6106D
Sub F/E ENGE6614G
IR BLASTER
3.3V-5V Buffer
ANT SW BOX
Input 5 (Front) VIDEO5 S-VIDEO5 L/R5
Monitor Output VIDEO S-VIDEO L/R
Input 4 VIDEO4 S-VIDEO4 L/R4
Input 3 VIDEO3 S-VIDEO3 L/R3
Input 2 Y2/VIDEO2 Pb2 Pr2 L/R2
Input 1 Y1 Pb1 Pr1 L/R1
Input (PC) Audio L/R
Input (DVI) Audio L/R
Monitor Audio Out L/R
SW REG. PQ1CF2
SW REG. SI-8033S
BA09SFP
SI-3033
SI-3025LSA
SI-3050LSA
+6V SW
+17V SW
+30V
SW Trans-former T901
SW REG
AC INLET
AC120V
POWER1
STB +5V REG.
+10V

BLOCK DIAGRAM

FC/MSC BOARD

NOTE: FC/MSC unit in the AVC20 chassis is considered a component and therefore removing its top or bottom shield covers is prohibited. The block diagram must be used only as a functional reference. Tampering with the IC ICD07D is also prohibited.



D+3.3V (138m)
D+2.5V (715m)
F1+9V (214m)
F2+9V (AO+9V) (328m)
M+9V (233m)
STB+5V (51m)
DM+3.3V (1.14)
FC/MSC BOARD
AI+9M
AI+9S
REG
FC MPLL5V
FC SPLL5V
D+5V
AI+3.3M
AI+3.3S
FC A/D2.5V
FC VDD2.5V
F2+5V
AO+5V
FC D/A2.5V
FC PLL2.5V
A+5V
MSC PLL 3.3V
MSC VDD1
WPLLAVD
DPLLAVD
R/G/B AVD
Key ROM
P001P
MY (27)
MCb (28)
MCr (29)
MH (31)
MV (32)
SY
SCb
SCr
SV
SH
LPF
XO
DIGITAL VDDL
DIGITAL VDD
FC
YGT-035
AFM715
YL19MK1
PLL
TLC2932
HD-OUT, VD-OUT
KMASK
RCLP
YS
RV
RH
FC MPU
M37471E8
RESET
PST9142
SDRAM
(n=2)
FC Block
YOUT
B-YOUT
R-YOUT
-6dB
SW
Y-OUT
U-OUT
V-OUT
PI5C 339OQ
MH,MV
RGB PROCESSOR
TA1399N
R1,G1,B1
R2,G2,B2
M61303FP
RDIN
GDIN
BDIN
VDIN
H1,V1
H2,V2
PC/TV
FC/HDSW
HDIN
VDIN
YGD-032
SYNC SEP
HSYNC
PLL ICS 1523 M
MPU2
H8
HSYNC
VSYNC
EEPROM
M24C08
OSD
MB90098A
LEVEL CONVERT
LV08
SW NC75B 3157
CLOCK MODULATOR
FS781
MSC
YGD-037
HAOUT,VAOUT,DE,CLK
WHSYNC
WVSYNC
WVMASK
WPLLCLKIN
EXTWHOIN
PVOUT
SDRAM (n=3)
SDAH/SCLH
ICD01D
Sil168CT64
TMDS
TX0-
TX0+
TX1-
TX1+
TX2-
TX2+
TXC-
TXC+
DDC CLK
DDC DATA
D OUT
STB+5V
8 AVDET
3 PARITY
RS232C
DS14C232CM
1 TXD
2 RXD
4 REM-PDP
5 Audio R
6 Audio L
7 PDDET
2H/2V
FC-ENA,MSC-ENA,DATA,CLK
MSC-ENA,DATA,CLK
SCL0,SDA0,MATORIX
OSD-R/OSD-G/OSD-B/OSD-BLK/OSD-HALFTONE
OSD-RST,OSD-CS2,OSD/DATA,CLK
TXD/RDC/REM-DP/PDDET/AudioL/AudioR,AVDET,RMRST
IIC PORT
TXD,RXD,RES,EVPP,MD
RESET
ODCL
PANEL LINK
Sil907
with HDCP
Key ROM
DDC
24LC21A
V1
SDA/SCL
RIN2,GIN2,BIN2
RIN1,GIN1,BIN1
H/V
DVI/PC
SW
PI5C 339OQ
RGB2(DIGITAL) INPUT2
DIGITAL IN DVI
RGB1(ANALOG)INPUT1
PC IN D-SUB15

Power Supply board / Filter board / LED board / Mains Switch / AC Inlet

Power Supply board (Power/Filter PWB) (only for the PT2-E chassis):

I901	**STR-F6674**	**Hybrid IC with a built-in MOS FET and control IC, designed for flyback converter type switch mode power supply application**
I902	**TLP621**	**Photo-coupler for feedback**
T901		**Switch mode transformer**
F910		**T1.25AH Fuse**

Input voltage : 380Vdc from power supply unit on PDP module
Output voltage : 14V for 3.3V regulator and 12V for Audio circuit on Signal/Sound boa

Filter board (Only for the PT2-G chassis):

L901	**Line filter 1mH**
L902	**Line filter 5mH**
F901	**T3.15AH Fuse**
C901	**100nF/AC250V**

LED board:

H001	**GP1U28QK**	**Infrared receiver**
D001	**SPR-54MVW**	**Red and green LED**

Mains Switch

S900 **SDDFC30300**

AC Inlet

E901	**GL-2100M**	**AC Inlet (with noise filter)**

Signal / Sound board 1/4 (Micro circuit):

I004	**LP3965**	**2.5V Regulator**

Input voltage ; 3.5V at pin 2
Output voltage ; 2.5V at pin 3

I006	**ST24C16FM6**	**EEPROM**

Supply voltage ; STB+5V at pin 8
Controlled by I^2C ; SDA0 at pin 5 and SCL0 at pin 6

I007	**PST9142NA**	**Reset IC**
I008	**HD64F3397**	**PDP micro controller**

Supply voltage ; STB+5V at pin 8, 29, 47
Control through I^2C ; SDA1 at pin 55 and SCL1 at pin 54

IP02	**PQ1CZ1**	**3.3V PWM chopper regulator**

Input voltage ; 14V at pin 1
Output voltage ; 3.3V at pin 2

Signal / Audio board 2/4 (TMDS receiver circuit):

I600 SIL861 TMDS(Transition Minimized Differential Signaling) Receiver

Supply voltage: 2.5V at pin 2,11,27,75,87,104,113,137,147,153 and 208
Supply voltage: 3.3V at pin 12,24,78,92,123,135 and 159
Input signals ; TMDS data (4 pairs) and clock (1 pair) serial signals from AVC
Output signals ; Digital RGB (8x3), HVsync (2), control (2) and clock (1) parallel signals for I202

I601 M24C32 EEPROM

Supply voltage ; STB+5V at pin 8
Controlled by I^2C ; SDA0 at pin 5 and SCL0 at pin 6

I602 24LC128 EEPROM

Supply voltage ; STB+5V at pin 8
Controlled by I^2C ; SDA0 at pin 5 and SCL0 at pin 6

I603 DS14C232CM RS232C level converter

Supply voltage: 5V at pin 16
Signal converter ; between RS232C (15Vpp) signal from AVC and 5Vpp signal for PDP micro

Signal / Audio board 3/4 (LVDS transmitter circuit):

I201 HD74LVC244A Buffer

Supply voltage ; P+3.3V at pin 20
Input signal ; 5Vp signal from I008 (Micro), 3.3Vp signal from Logic board on PDP module
Output signal ; 3.3Vp signal for Logic board on PDP module and 5Vp signal for I008 (Micro)

I202 DS90C385 LVDS (Low Voltage Differential Signaling) Transmitter

Supply voltage ; TL+3.3V at pin 1, 9, 26, 34, 44
Input signals ; Digital RGB (8x3), HVSync (2), Control(2) and Clock (1) parallel signals from I103 (TMDS)
Output signals ; LVDS data (4 pairs) and clock (1 pair) serial signals for Logic board on PDP module

Signal / Audio board 4/4 (Audio circuit):

IC401 NJM1133AN Audio control (Volume, Balance, Bass/Treble, Surround)

Supply voltage ; +12V at pin 16
Controlled by I^2C ; SDA5V at pin 13 and SCL5V at pin 14
Input signals ; Analogue audio L, R signal from AVC
Output signals ; Analogue audio L, R signal for IC402

IC402 NJM2192AM TruBass

Supply voltage ; +12V at pin 16
Controlled by PCIN signal from IC403
Input signals ; Analogue audio L, R signal from IC401
Output signals ; Analogue audio L, R signal for IC404

IC403 BU4052BCF TruBass Switch

Supply voltage ; +7.5V at pin 16
Input signals ; A and B voltage from IC401 H: 5V, L: 0V
Output signal ; Y OUT signal for IC402

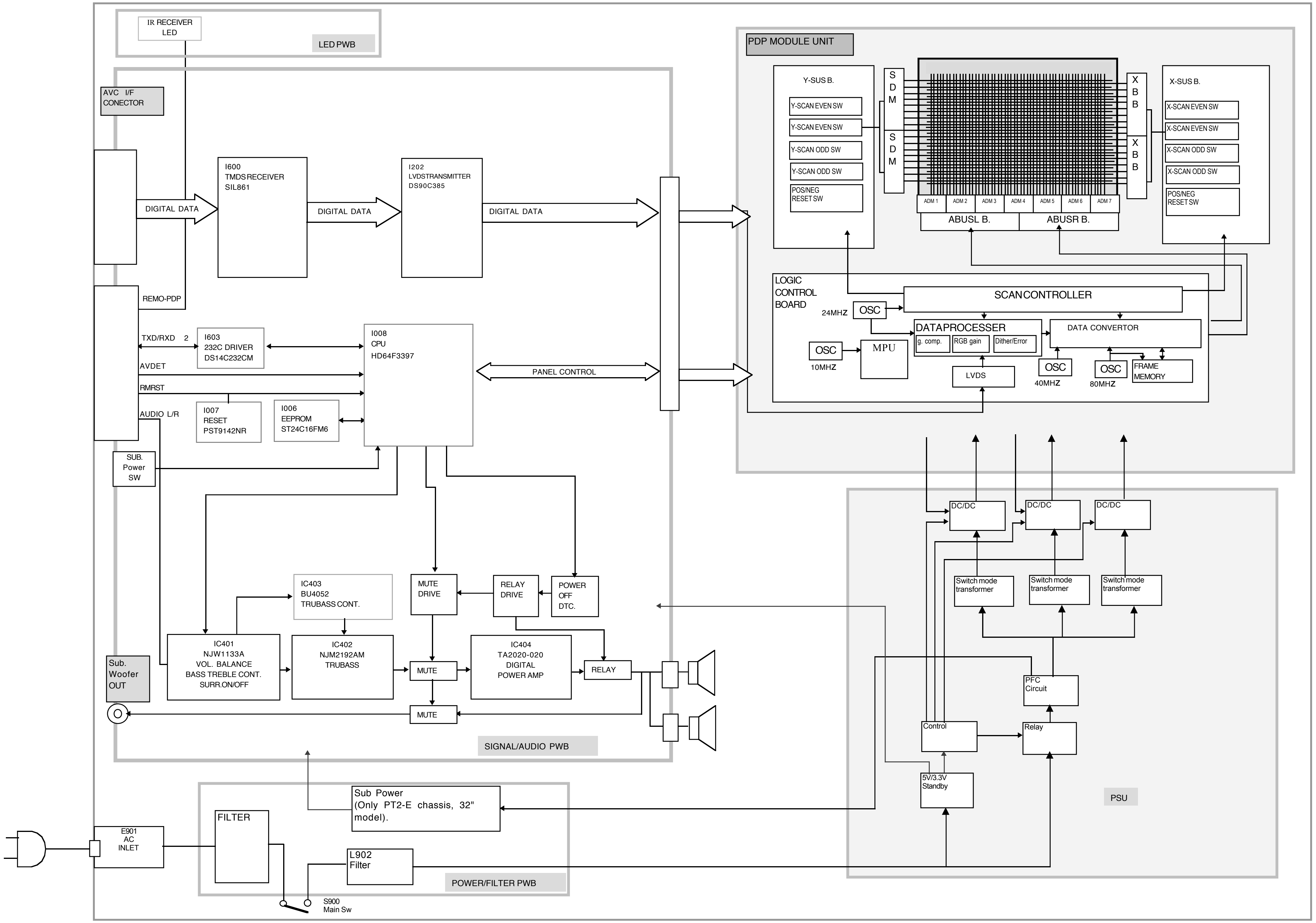
A	B	Y OUT(=PCIN on IC402)	TruBass
L	L	Y0	OFF
L	H	Y1	LOW
H	L	Y2	MID
H	H	Y3	HIGH

IC404 TA2020-020 PWM Audio Amplifier

Supply voltage ; +12V at pin 22, 25 and 27
Input signals ; Analogue audio signal L, R from IC402
Output signals ; Speaker drive voltage for L, R speakers and sub-woofer speaker

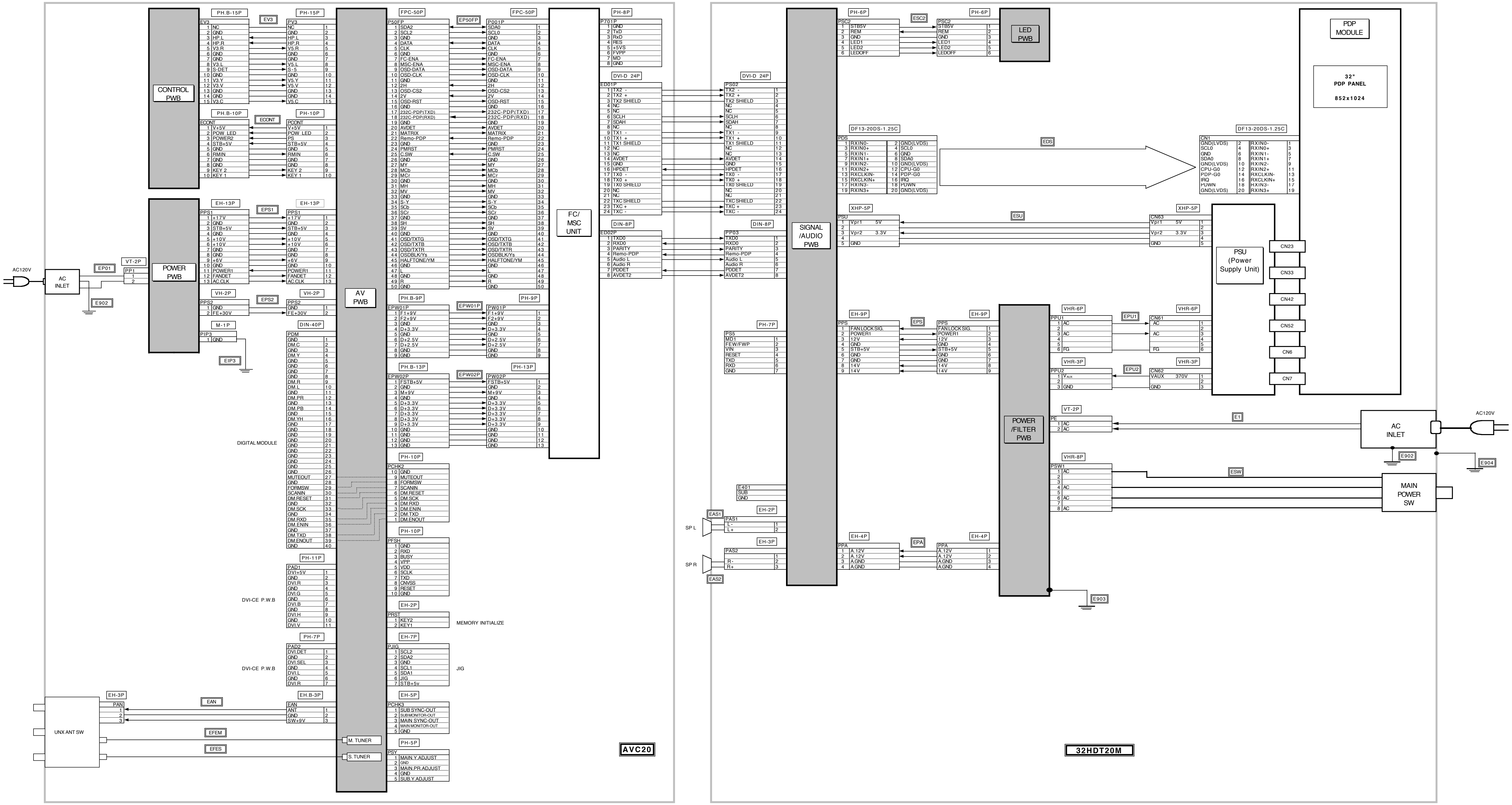
BLOCK DIAGRAM

32/42HDT20M


IR RECEIVER
LED
LED PWB
AVC I/F CONECTOR
DIGITAL DATA
I600
TMDS RECEIVER
SIL861
DIGITAL DATA
I202
LVDS TRANSMITTER
DS90C385
DIGITAL DATA
REMO-PDP
TXD/RXD 2
I603
232C DRIVER
DS14C232CM
I008
CPU
HD64F3397
AVDET
PANEL CONTROL
RMRST
AUDIO L/R
I007
RESET
PST9142NR
I006
EEPROM
ST24C16FM6
SUB. Power SW
IC403
BU4052
TRUBASS CONT.
MUTE DRIVE
RELAY DRIVE
POWER OFF DTC.
Sub. Woofer OUT
IC401
NJW1133A
VOL. BALANCE
BASS TREBLE CONT.
SURR.ON/OFF
IC402
NJM2192AM
TRUBASS
MUTE
IC404
TA2020-020
DIGITAL
POWER AMP
RELAY
MUTE
SIGNAL/AUDIO PWB
PDP MODULE UNIT
Y-SUS B.
Y-SCAN EVEN SW
Y-SCAN EVEN SW
Y-SCAN ODD SW
Y-SCAN ODD SW
POS/NEG RESET SW
SDM
SDM
XBB
XBB
X-SUS B.
X-SCAN EVEN SW
X-SCAN EVEN SW
X-SCAN ODD SW
X-SCAN ODD SW
POS/NEG RESET SW
ADM 1
ADM 2
ADM 3
ADM 4
ADM 5
ADM 6
ADM 7
ABUSL B.
ABUSR B.
LOGIC CONTROL BOARD
SCAN CONTROLLER
24MHZ
OSC
DATAPROCESSER
g. comp.
RGB gain
Dither/Error
DATA CONVERTOR
OSC
10MHZ
MPU
LVDS
OSC
40MHZ
OSC
80MHZ
FRAME MEMORY
DC/DC
DC/DC
DC/DC
Switch mode transformer
Switch mode transformer
Switch mode transformer
PFC Circuit
Control
Relay
5V/3.3V Standby
PSU
E901
AC
INLET
FILTER
Sub Power
(Only PT2-E chassis, 32" model).
L902
Filter
POWER/FILTER PWB
S900
Main Sw

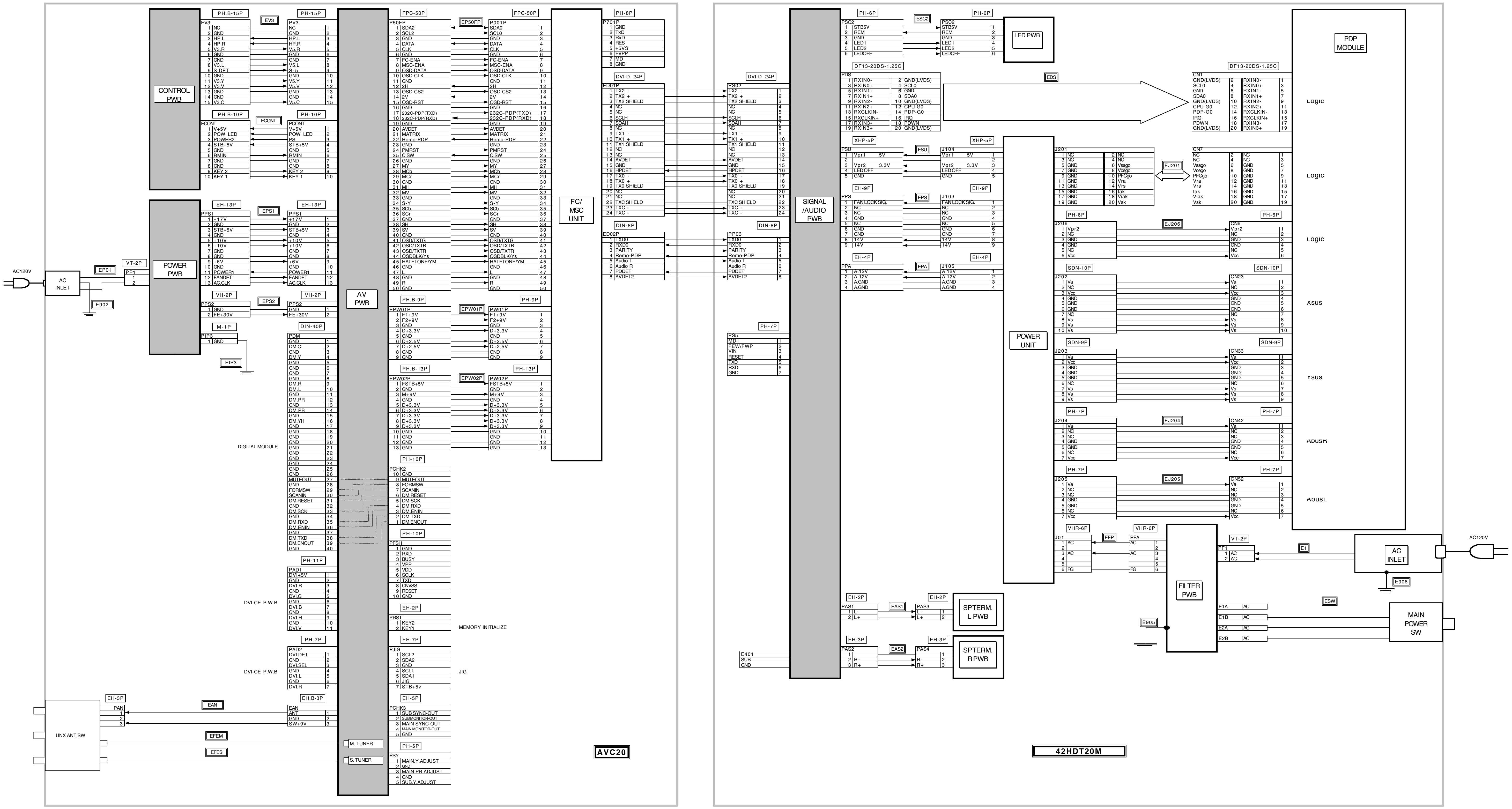
CONNECTION DIAGRAM

32HDT20M


CONTROL PWB
POWER PWB
AV PWB
FC/ MSC UNIT
AC INLET
AC120V
E902
EP01
VT-2P
PP1
EV3
PH.B-15P
PH-15P
PV3
ECONT
PH.B-10P
PH-10P
PCONT
EH-13P
EPS1
PPS1
VH-2P
EPS2
PPS2
M-1P
PIP3
EIP3
DIN-40P
PDM
DIGITAL MODULE
PH-11P
PAD1
DVI-CE P.W.B
PH-7P
PAD2
EH-3P
PAN
EAN
EH.B-3P
UNX ANT SW
EFEM
EFES
M. TUNER
S. TUNER
FPC-50P
EP50FP
P50FP
P001P
PH-8P
P701P
DVI-D 24P
ED01P
DIN-8P
ED02P
PH.B-9P
EPW01P
PH-9P
PW01P
PH.B-13P
EPW02P
PH-13P
PW02P
PH-10P
PCHK2
PFSH
EH-2P
PRST
MEMORY INITIALIZE
EH-7P
PJIG
JIG
EH-5P
PCHK3
PH-5P
PSY
AVC20
SIGNAL /AUDIO PWB
LED PWB
PDP MODULE
32" PDP PANEL 852x1024
PH-6P
ESC2
PSC2
PS02
DIN-8P
PP03
DF13-20DS-1.25C
PDS
EDS
CN1
XHP-5P
PSU
ESU
CN63
PSU (Power Supply Unit)
CN23
CN33
CN42
CN52
CN6
CN7
PH-7P
PS5
EH-9P
EPS
PPS
POWER /FILTER PWB
VHR-6P
PPU1
EPU1
CN61
VHR-3P
PPU2
EPU2
CN62
VT-2P
PE
E1
AC INLET
AC120V
E902
E904
VHR-8P
PSW1
ESW
MAIN POWER SW
E401
EAS1
EH-2P
PAS1
SP L
EH-3P
PAS2
SP R
EAS2
EH-4P
EPA
PPA
E903
32HDT20M

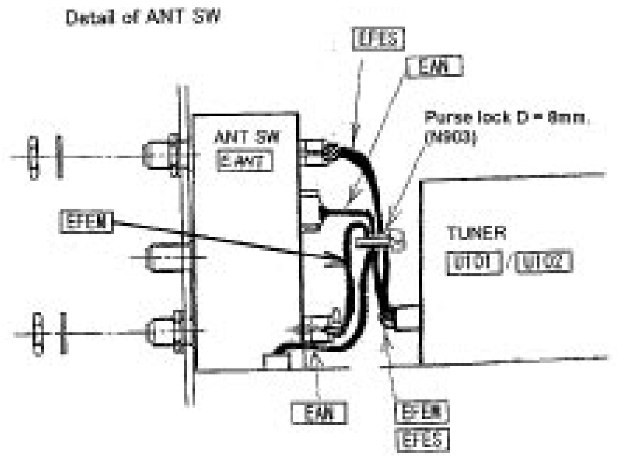
CONNECTION DIAGRAM

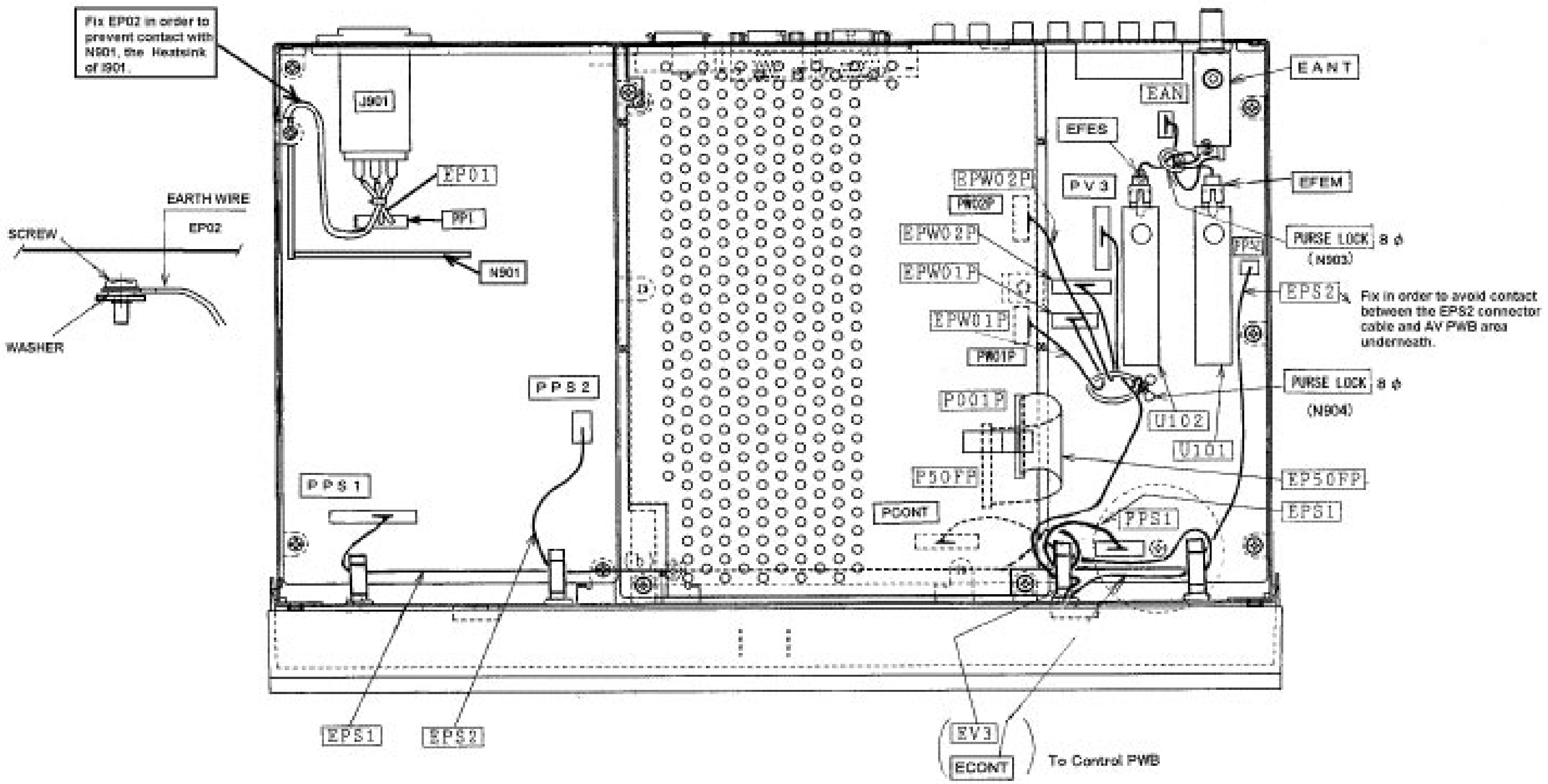
42HDT20M


CONTROL PWB
POWER PWB
AV PWB
FC/ MSC UNIT
AC INLET
AC120V
UNX ANT SW
DIGITAL MODULE
DVI-CE P.W.B
MEMORY INITIALIZE
JIG
M. TUNER
S. TUNER
AVC20
SIGNAL /AUDIO PWB
LED PWB
POWER UNIT
PDP MODULE
FILTER PWB
SPTERM. L PWB
SPTERM. R PWB
MAIN POWER SW
Logic
Xsus
Ysus
Addr
42HDT20M
PH.B-15P
PH-15P
EV3
PV3
PH.B-10P
PH-10P
ECONT
PCONT
EH-13P
EPS1
PPS1
VH-2P
EPS2
PPS2
M-1P
PIP3
EIP3
VT-2P
PP1
EP01
E902
DIN-40P
PDM
PH-11P
PAD1
PH-7P
PAD2
EH-3P
EAN
EH.B-3P
EFEM
EFES
FPC-50P
P50FP
EP50FP
P001P
PH.B-9P
EPW01P
PW01P
PH-9P
PH.B-13P
EPW02P
PW02P
PH-13P
PCHK2
PFSH
EH-2P
PRST
PJIG
EH-5P
PCHK3
PH-5P
PSY
PH-8P
P701P
DVI-D 24P
ED01P
PS02
DIN-8P
ED02P
PP03
PS5
E401
PH-6P
PSC2
ESC2
DF13-20DS-1.25C
PDS
EDS
CN1
XHP-5P
PSU
ESU
J104
J201
EJ201
CN7
EH-9P
PPS
EPS
J103
J206
EJ206
CN6
EH-4P
PPA
EPA
J105
SDN-10P
J202
CN23
SDN-9P
J203
CN33
J204
EJ204
CN42
J205
EJ205
CN52
VHR-6P
J01
EFP
PFA
PF1
E1
E906
E905
ESW
E1A
E1B
E2A
E2B
EAS1
PAS1
PAS3
EAS2
PAS2
PAS4

WIRING DIAGRAM

AVC20


Detail of ANT SW
EFES
EAN
Purse lock D = 8mm.
(N903)
ANT SW
EANT
EFEM
TUNER
U101 / U102
EAN
EFEM
EFES


Fix EP02 in order to prevent contact with N901, the Heatsink of I901.

Fix in order to avoid contact between the EPS2 connector cable and AV PWB area underneath.
J901
EP01
PP1
N901
EARTH WIRE
EP02
SCREW
WASHER
PPS2
PPS1
EPS1
EPS2
EV3
ECONT
To Control PWB
EANT
EAN
EFES
PV3
EFEM
EPW02P
PW02P
EPW02P
EPW01P
EPW01P
PW01P
P001P
P50FP
PCONT
PPS1
U102
U101
PURSE LOCK 8 φ
(N903)
EPS2
PURSE LOCK 8 φ
(N904)
EP50FP
EPS1

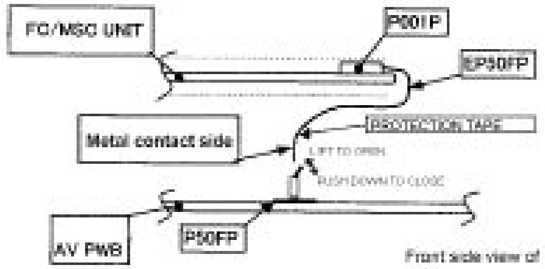
SPECIFICATIONS

1. This is the AVC1-U chassis WIRING DRAWING for the AVC20 model, refer to these instructions after servicing the AVC unit to make a correct reassembly of the parts and connector wires.
2. Table 1 shows the recommended order for assembling the connectors on to the AVC unit.

Table-1

Name of connection cable	From		To		Remarks
	Connection point	Parts or circuit board	Connection point	Parts or circuit board	
EFEM	EFE1	ANT SW	U101	MAIN TUNER	Coaxial cable
EFES	EFE2	ANT SW	U102	SUB TUNER	Coaxial cable
EP01	PP1	POWER PWB	—	AC INLET	
EP02	—	AC INLET	—	CHASSIS FRAME	
EP50FP	P50FP	AV PWB	P001P	FC/MSC UNIT	
EPS1	PPS1	POWER PWB	PPS1	AV PWB	
EPS2	PPS2	POWER PWB	PPS2	AV PWB	
EAN	EAN	AV PWB	PAN	ANT SW	
EPW01P	EPW01P	AV PWB	PW01P	FC/MSC UNIT	
EPW02P	EPW02P	AV PWB	PW02P	FC/MSC UNIT	
ECONT	ECONT	CONTROL PWB	PCONT	AV PWB	
EV3	EV3	CONTROL PWB	PV3	AV PWB	

3. Every connector should be inserted completely, to ensure a proper assembly.
4. If necessary to remove FC/MSC unit, do so by disconnecting EP50FP flat cable with great care in order to avoid damage to the connector terminals P50FP(on the AV PWB) and/or P001P (on the FC/MSC unit).
   Care must be taken due to very fragile connector terminals.

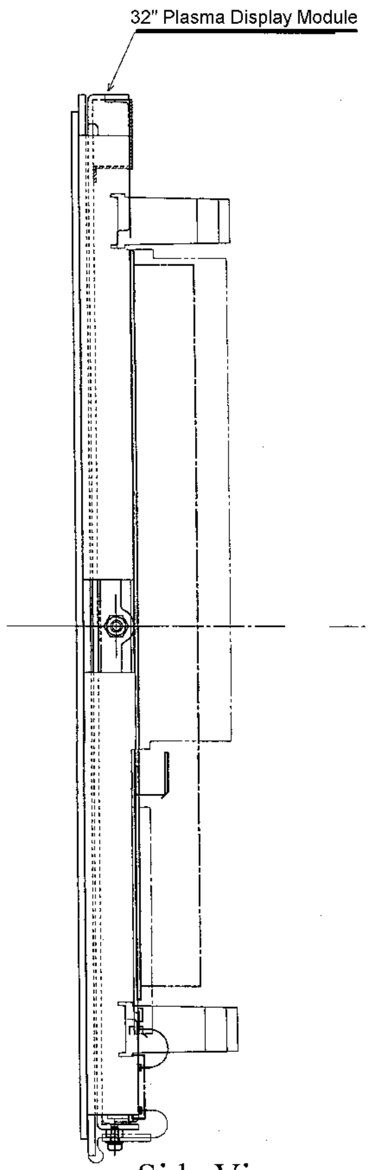

FC/MSC UNIT
P001P
EP50FP
Metal contact side
PROTECTION TAPE
LIFT TO OPEN
PUSH DOWN TO CLOSE
AV PWB
P50FP

Front side view of AVC20 unit

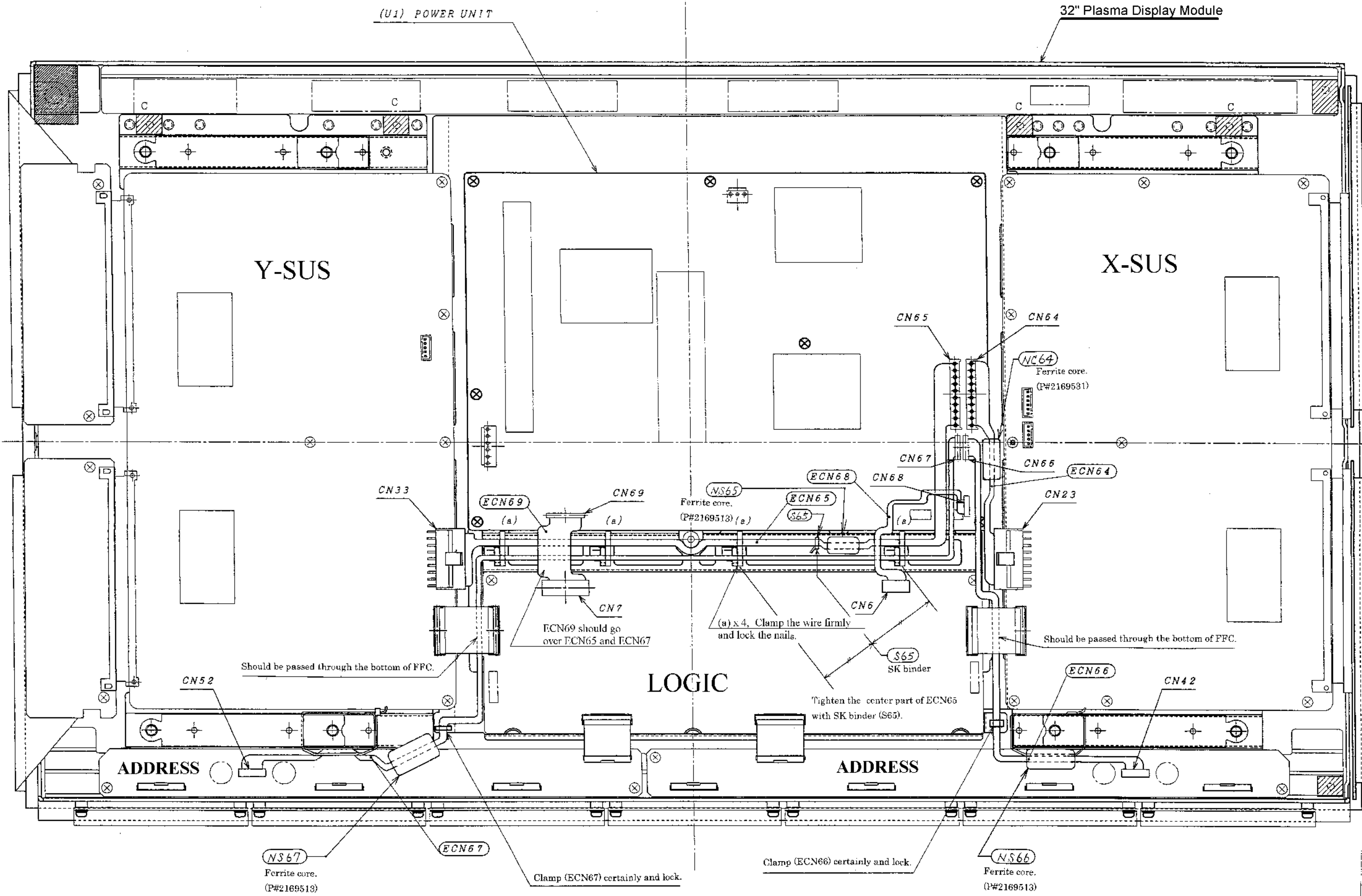
5. When reinserting the flat cable EP50FP, be careful of the side of the metallic contacts before closing the fastening locks of the connector terminal P50FP.
6. Once FC/MSC is out, avoid extra tamper to it by placing it in a position that ensures no stress to the EP50FP flat connector and P001P terminal.

32HDT20M WIRING DIAGRAM

32HDT20M (1 of 3)


32" Plasma Display Module

Side View

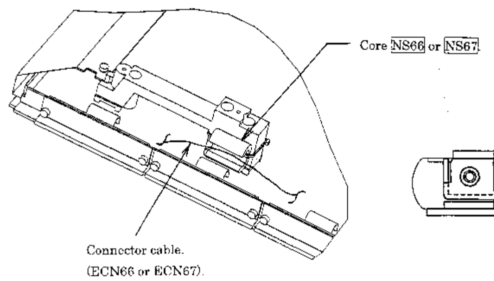

(U1) POWER UNIT
32" Plasma Display Module
Y-SUS
X-SUS
LOGIC
ADDRESS
ADDRESS
CN65
CN64
NC64
Ferrite core.
(P#2169531)
CN67
CN66
ECN64
CN23
CN33
ECN69
(a)
CN69
(a)
NS65
Ferrite core.
(P#2169513)
(a)
ECN68
ECN65
S65
CN68
(a)
CN7
CN6
ECN69 should go over ECN65 and ECN67
(a) x 4, Clamp the wire firmly and lock the nails.
S65
SK binder
Tighten the center part of ECN65 with SK binder (S65).
Should be passed through the bottom of FFC.
Should be passed through the bottom of FFC.
CN52
ECN66
CN42
NS67
Ferrite core.
(P#2169513)
ECN67
Clamp (ECN67) certainly and lock.
Clamp (ECN66) certainly and lock.
NS66
Ferrite core.
(P#2169513)

Back View

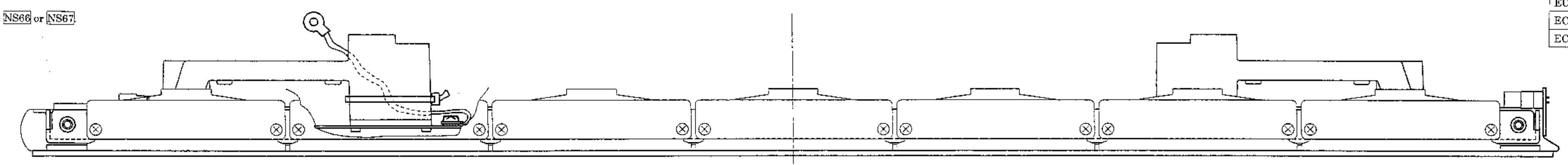
Table of 32 " panel module wire connections.

Cable (No.)	Connection(PSU→each board)	Note
ECN64	CN64(PSU)→CN23(X-SUS)	10P VH
ECN65	CN65(PSU)→CN33(Y-SUS)	9P VH
ECN66	CN66(PSU)→CN42(ADD.)	7P PH
ECN67	CN67(PSU)→CN52(ADD.)	7P PH
ECN68	CN68(PSU)→CN6(Logic)	6P PH
ECN69	CN68(PSU) →CN7(Logic)	20P FFC

Assembly of the ferrite cores NS66/NS67.


Core NS66 or NS67
Connector cable.
(ECN66 or ECN67)

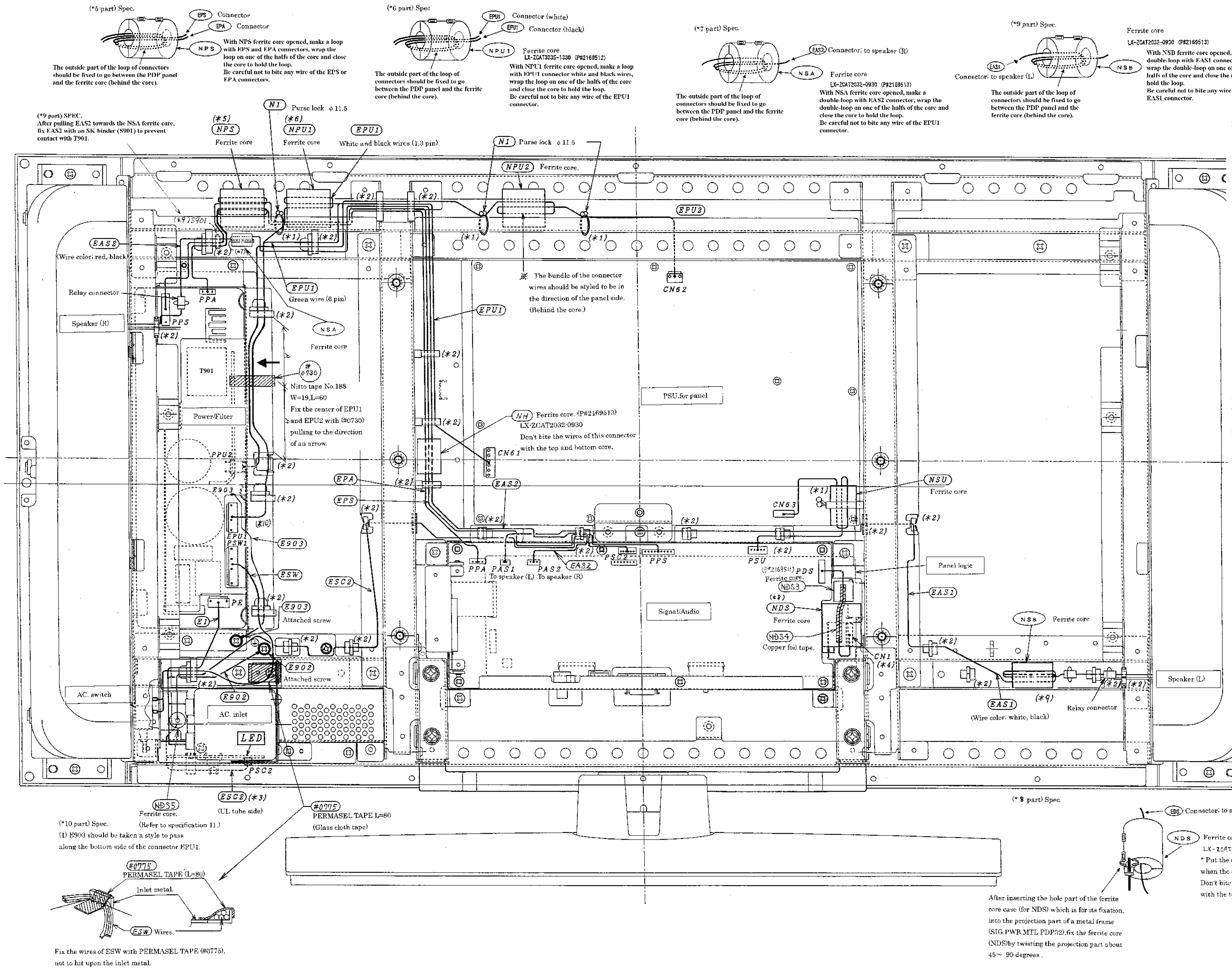
Put (ECN66) or (ECN67) into a ferrite core (NS66 or NS67), after that close these cores.



Bottom View

32HDT20M WIRING DIAGRAM

32HDT20M (2 of 3)



(*5 part) Spec.

With NPS ferrite core opened, make a loop with EPS and EPA connectors, wrap the loop on one of the halfs of the core and close the core to hold the loop.
Be careful not to bite any wire of the EPS or EPA connectors.

The outside part of the loop of connectors should be fixed to go between the PDP panel and the ferrite core (behind the core).

(*6 part) Spec

With NPU1 ferrite core opened, make a loop with EPU1 connector white and black wires, wrap the loop on one of the halfs of the core and close the core to hold the loop.
Be careful not to bite any wire of the EPU1 connector.

The outside part of the loop of connectors should be fixed to go between the PDP panel and the ferrite core (behind the core).

(*7 part) Spec.

With NSA ferrite core opened, make a double-loop with EAS2 connector, wrap the double-loop on one of the halfs of the core and close the core to hold the loop.
Be careful not to bite any wire of the EPU1 connector.

The outside part of the loop of connectors should be fixed to go between the PDP panel and the ferrite core (behind the core).

(*9 part) Spec.

With NSB ferrite core opened, make a double-loop with EAS1 connector, wrap the double-loop on one of the halfs of the core and close the core to hold the loop.
Be careful not to bite any wire of the EAS1 connector.

The outside part of the loop of connectors should be fixed to go between the PDP panel and the ferrite core (behind the core).

(*9 part) SPEC.
After pulling EAS2 towards the NSA ferrite core, fix EAS2 with an SK binder (S901) to prevent contact with T901.

※ The bundle of the connector wires should be styled to be in the direction of the panel side. (Behind the core.)

Nitto tape No.188
W=19,L=60
Fix the center of EPU1 and EPU2 with (#0730) pulling to the direction of an arrow.

NH Ferrite core. (P#2169513)
LX-ZCAT2032-0930
Don't bite the wires of this connector with the top and bottom core.

(*10 part) Spec.
(1) E903 should be taken a style to pass along the bottom side of the connector EPU1.

Fix the wires of ESW with PERMASEL TAPE (#0775), not to hit upon the inlet metal.

(*8 part) Spec.

* Put the cores to the wires of the connector when the cores are opened, after that close these cores.
Don't bite the wires of this connector with the top and bottom cores.

After inserting the hole part of the ferrite core case (for NDS) which is for its fixation, into the projection part of a metal frame (SIG.PWB.MTL PDP32),fix the ferrite core (NDS)by twisting the projection part about 45～ 90 degrees .

EPS Connector
EPA Connector
NPS
EPU1 Connector (white)
EPU1 Connector (black)
NPU1 Ferrite core
LX-ZCAT3035-1330 (P#2169512)
EAS2 Connector; to speaker (R)
NSA Ferrite core
LX-ZCAT2032-0930 (P#2169513)
EAS1 Connector; to speaker (L)
NSB
Ferrite core
LX-ZCAT2032-0930 (P#2169513)
N1 Purse lock ϕ 11.5
(*5) NPS Ferrite core
(*6) NPU1 Ferrite core
EPU1 White and black wires (1,3 pin).
N1 Purse lock ϕ 11.5
NPU2 Ferrite core.
EPU2
(*9)S901
(*1)
(*2)
(*7)
EAS2
(Wire color; red, black)
Relay connector
Speaker (R)
PPA
PPS
EPU1 Green wire (6 pin)
NSA Ferrite core
T901
#0730
Power/Filter
PPU2
E903
(*10)
EPU1
PSW1
E903
ESW
PE
E1
E903 Attached screw
E902 Attached screw
E902
AC. switch
AC. inlet
LED
PSC2
EPU1
CN62
PSU for panel
CN61
EPA
EPS
EAS2
ESC2
CN63
PPA PAS1 PAS2
To speaker (L) To speaker (R)
EAS2
PSC2
PPS
PSU
(P#2169511) PDS
Ferrite core.
NDS3
(*8)
NDS Ferrite core
NDS4 Copper foil tape.
Signal/Audio
CN1
(*4)
NSU Ferrite core
Panel logic
EAS1
NSB Ferrite core
EAS1
(Wire color; white, black)
(*9)
Relay connector
Speaker (L)
NDS5 Ferrite core.
(Refer to specification 11.)
ESC2 (*3)
(UL tube side)
#0775
PERMASEL TAPE L=80
(Glass cloth tape)
#0775
PERMASEL TAPE (L=80)
Inlet metal.
ESW Wires.
EDS Connector; to signal/audio
NDS Ferrite core.
LX-ZCAT3035-1330 (P#2169512)

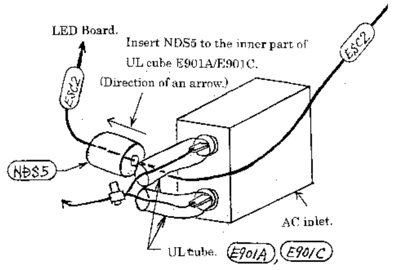
NOTES:

1. This drawing shows the wiring diagram for the PT2-E chassis, TV set model number 32HDT20M.
2. This drawing shows the back view of the PDP set.
3. Insert the connectors to the root of the post except the ones with locks, for these ones, make sure that the locks are firmly assembled.
4. In the following table all connectors and connections are shown.

From		Cable	To		Preparations
Connect. Point	Place (PWB)		Connect. Point	Place (PWB)	
Relay Connector	SP (L)	EAS1	PAS1	Signal/Audio	
Relay Connector	SP (R)	EAS2	PAS2	Signal/Audio	
PSC2	LED	ESC2	PSC2	Signal/Audio	
CN1	Panel logic	EDS	PDS	Signal/Audio	Need
CN63	Panel PSU	ESU	PSU	Signal/Audio	Need
PPS	Power/Filter	EPS	PPS	Signal/Audio	
PPA	Power/Filter	EPA	PPA	Signal/Audio	
CN61	Panel PSU	EPU1	PPU1	Power/Filter	
CN62	Panel PSU	EPU2	PPU2	Power/Filter	Need
—	AC switch	ESW	PSW	Power/Filter	Need
-	AC inlet	E1	PE1	Power/Filter	Need
—	AC inlet	E902	—	Chassis	Need
E903	Power/Filter	E903	—	Chassis	
—	Panel module	E904		Chassis	

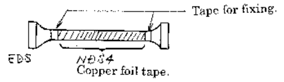
8.Insert ESC2 of LED PWB side (*3) showed in this drawing before incorporating UL tube side to a connector.
9. Insert EDS of panel logic side (*4) shown in this drawing before incorporating the chassis frame.
10. When you close a ferrite core, two nails of the core must be locked securely.

11. Assembly of NDS5 is as follows.



LED Board.
Insert NDS5 to the inner part of UL cube E901A/E901C.
(Direction of an arrow.)
ESC2
ESC2
NDS5
AC inlet.
UL tube.
E901A
E901C

12. Assembly of NDS4 is as follows.



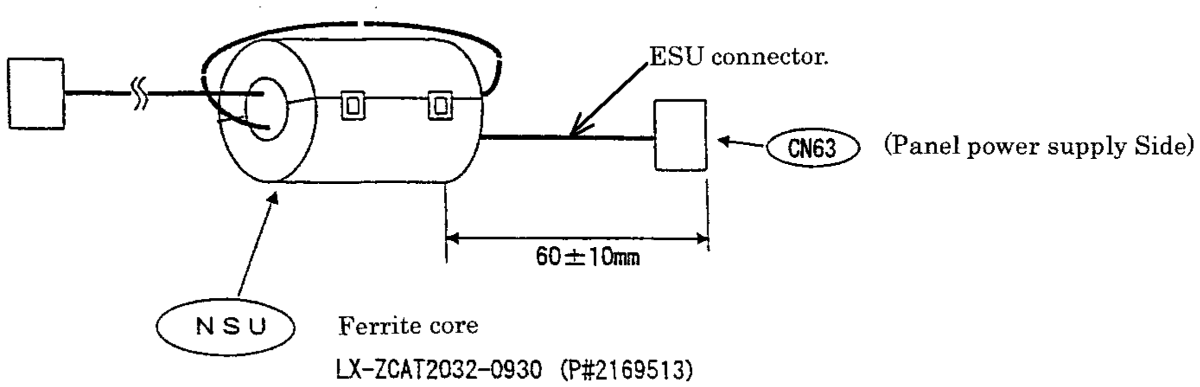
Tape for fixing.
EDS
NDS4
Copper foil tape.

(Note) L=70
Should be NDS4 twisted between the tape for fixing the connector (EDS).

32HDT20M WIRING DIAGRAM

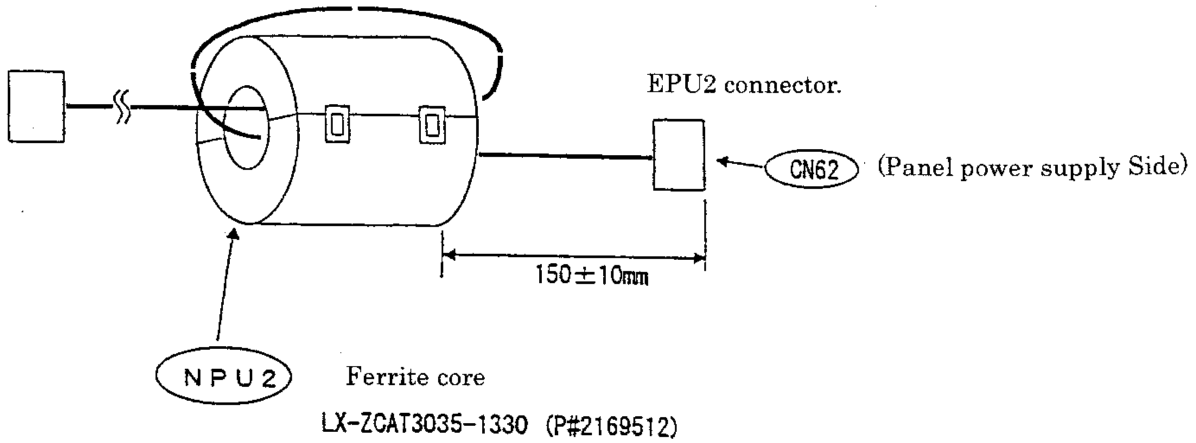
32HDT20M (3 of 3)

1. Insert ESU connector after making the next preparation.


ESU connector.
CN63
(Panel power supply Side)
60±10mm
NSU
Ferrite core
LX-ZCAT2032-0930 (P#2169513)

Loop the wires of ESU Connector once together
when cores are opened, after that close these cores.
Don't bite the wires of these ESU's wires with the top and bottom core.

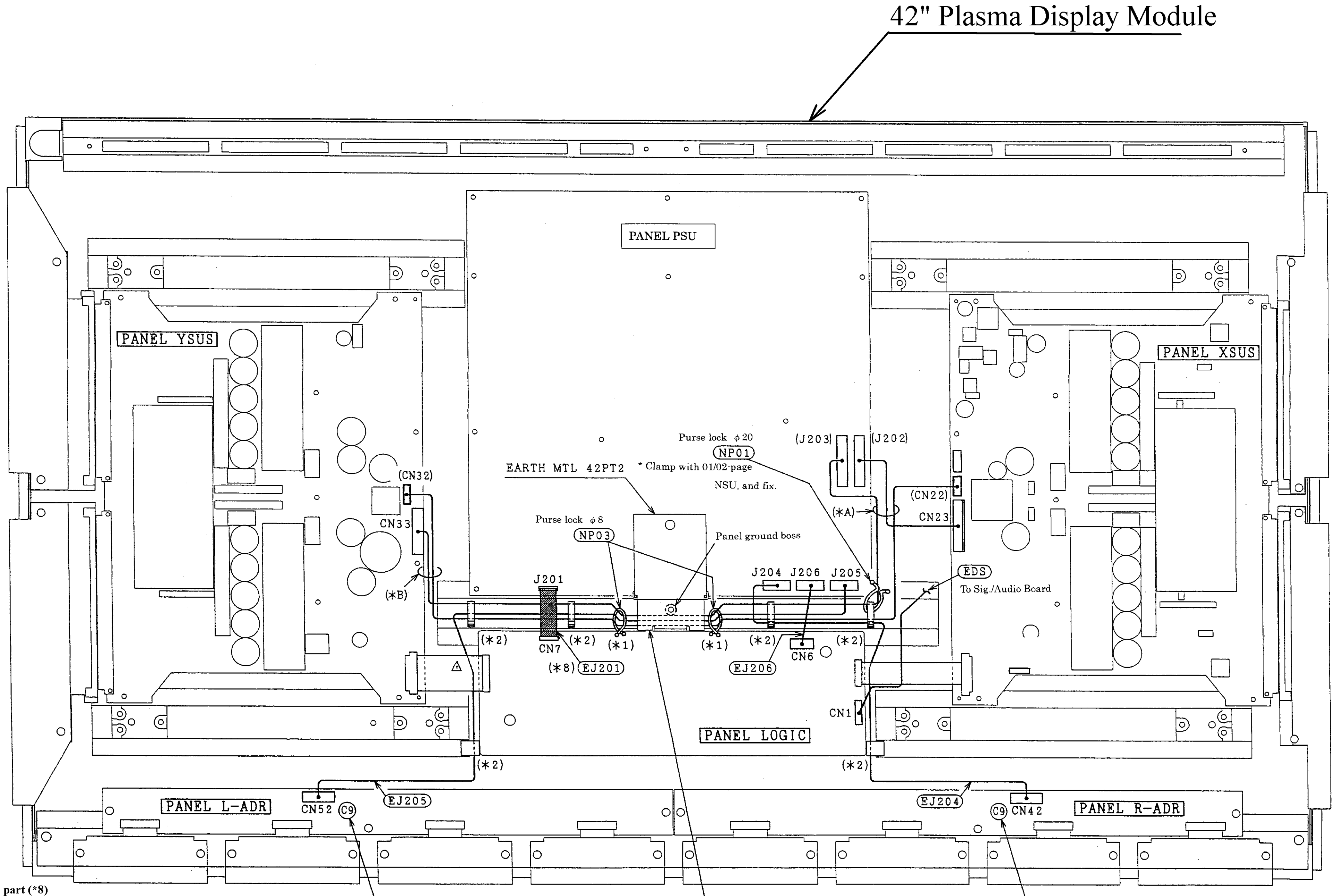
2. Insert EPU2 connector after making the next preparation.


EPU2 connector.
CN62
(Panel power supply Side)
150±10mm
NPU2
Ferrite core
LX-ZCAT3035-1330 (P#2169512)

Wrap one half of the NPU2 ferrite core with one loop of EPU2 connector. Close the NPU2 ferrite core. Be careful not to bite the connector wires while closing the top and bottom ferrite cores.

42HDT20M WIRING DIAGRAM

42HDT20M (1 of 2)


42" Plasma Display Module
PANEL PSU
PANEL YSUS
PANEL XSUS
(CN32)
CN33
(*B)
EARTH MTL 42PT2
* Clamp with 01/02-page NSU, and fix.
Purse lock ϕ20
NP01
Purse lock ϕ8
NP03
Panel ground boss
(J203)
(J202)
(*A)
(CN22)
CN23
J201
J204 J206 J205
EDS
To Sig./Audio Board
(*2)
CN7
(*1)
(*8) EJ201
EJ206
CN6
CN1
PANEL LOGIC
PANEL L-ADR
CN52
C9
EJ205
EJ204
CN42
PANEL R-ADR

Check that the C9 electrolitic capacitor on L-ADR board, does not make any contact with a grounded wire from J205

Check that the C9 electrolitic capacitor on R-ADR board, does not make any contact with a grounded wire from J204

With the 8mm diammeter Purse lock, style the PANEL LOGIC board and fix before attaching EARTH MTL 42PT2 part.

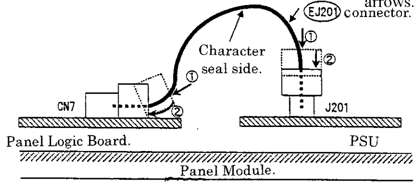
Check that while placing EARTH MTL 42PT2 part no wires on any of the connectors are damaged or bitten.

Specification for part (*8)

EJ201 connector must be inserted with its label facing towards the PDP panel module and should be fixed according to the next steps:

1) Unlock the CN7 and J201 connector terminals to insert the EJ201 connector untill the bottom of each terminal is reached by the tip of the connector.

2) Press the locks of the connector terminals to fix and hold the EJ201 connector. Follow the directions of the arrows.


EJ201 connector.
Character seal side.
①
②
CN7
J201
Panel Logic Board.
PSU
Panel Module.

SPECIFICATIONS

1. This figure shows the PT2-G chassis Wiring Diagram for the 42HDT20M model, plasma TV set. Refer to these instructions after servicing the plasma monitor to make a correct reassembly of the parts and connector wires.
2. This figure is a figure seen from the back of the set.
3. Insert all the connectors completely and check that the connectors with a locking mechanism are throughly locked.
4. Table 1 shows the recommended order for assembling the connectors on to the PDP monitor.

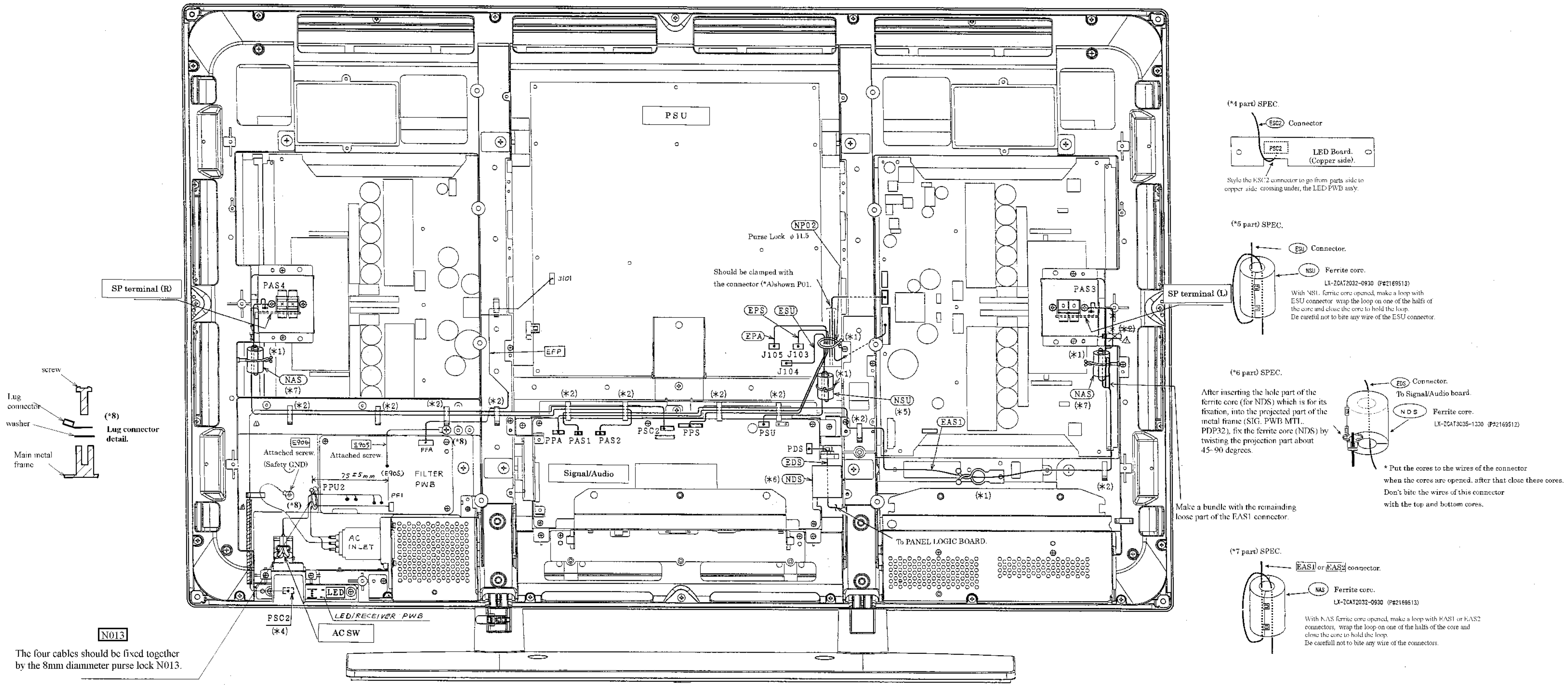
Table 1

From		Cable	To		Note
Connect. Point	Place (PWB)		Connect. Point	Place (PWB)	
J201	PSU	EJ201	CN7	Panel Logic	
J202	PSU	(J202)	CN23	Panel X-sus	
J203	PSU	(J203)	CN33	Panel Y-sus	
J204	PSU	EJ204	CN42	Panel R-ADR	
J205	PSU	EJ205	CN52	Panel L-ADR	
J206	PSU	EJ206	CN6	Panel Logic	
PAS1	SP terminal L	EAS1	PAS1	Signal/Audio	
PAS2	SP terminal L	EAS2	PAS2	Signal/Audio	
PSC2	LED	ESC2	PSC2	Signal/Audio	
CN1	Panel Logic	EDS	PDS	Signal/Audio	
J104	PSU	ESU	PSU	Signal/Audio	
J103	PSU	EPS	PPS	Signal/Audio	
J105	PSU	EPA	PPA	Signal/Audio	
E901	Inlet	E1	PF1	Filter	
E901	Inlet	E906	–	Chassis	
E905	Filter	E905	–	Chassis	

5. For every part with (*1) make sure of the lead clamp lock after passing the corresponding connector wires or ferrite clamp.
6. The mark (*2) is used to indicate that the lead holder has a fixing rod that must be inserted to the corresponding hole in the indicated place in the drawing.
7. When a ferrite core is closed, make shure that each of two clamping nails lock (click sound indicates ferrite is closed). Be carefull not to bite connector wires.

42HDT20M WIRING DIAGRAM

42HDT20M (2 of 2)


PSU
SP terminal (R)
PAS4
J101
EFP
NP02
EPS
ESU
EPA
J105
J103
J104
(*1)
NAS
(*7)
(*2)
(*8)
E906
E905
(E905)
25 ± 5mm
FILTER
PWB
PFA
PPU2
PF1
AC
INLET
LED
PSC2
(*4)
AC SW
LED/RECEIVER PWB
PPA
PAS1
PAS2
PPS
PSU
PDS
EDS
(*6)
NDS
NSU
(*5)
EAS1
PAS3
SP terminal (L)
Signal/Audio
screw
Lug connector
washer
Main metal frame
N013
ESC2
PSC2
LED Board.
(Copper side).
ESU
NSU
EDS
NDS
EAS1
EAS2
NAS

Purse Lock ϕ 11.5

Should be clamped with the connector (*A)shown P01.

Attached screw. (Safety GND)

Attached screw.

To PANEL LOGIC BOARD.

Make a bundle with the remaining loose part of the EAS1 connector.

(*8)
Lug connector detail.

N013

The four cables should be fixed together by the 8mm diammeter purse lock N013.

(*4 part) SPEC.

ESC2 Connector

Style the ESC2 connector to go from parts side to copper side crossing under, the LED PWB ass'y.

(*5 part) SPEC.

ESU Connector.

NSU Ferrite core.
LX-ZCAT2032-0930 (P#2169513)

With NSU ferrite core opened, make a loop with ESU connector wrap the loop on one of the halfs of the core and close the core to hold the loop.
Be careful not to bite any wire of the ESU connector.

(*6 part) SPEC.

After inserting the hole part of the ferrite core (for NDS) which is for its fixation, into the projected part of the metal frame (SIG. PWB MTL. PDP32), fix the ferrite core (NDS) by twisting the projection part about 45~90 degrees.

EDS Connector.
To Signal/Audio board.

NDS Ferrite core.
LX-ZCAT3035-1330 (P#2169512)

* Put the cores to the wires of the connector
when the cores are opened. after that close these cores.
Don't bite the wires of this connector
with the top and bottom cores.

(*7 part) SPEC.

EAS1 or EAS2 connector.

NAS Ferrite core.
LX-ZCAT2032-0930 (P#2169513)

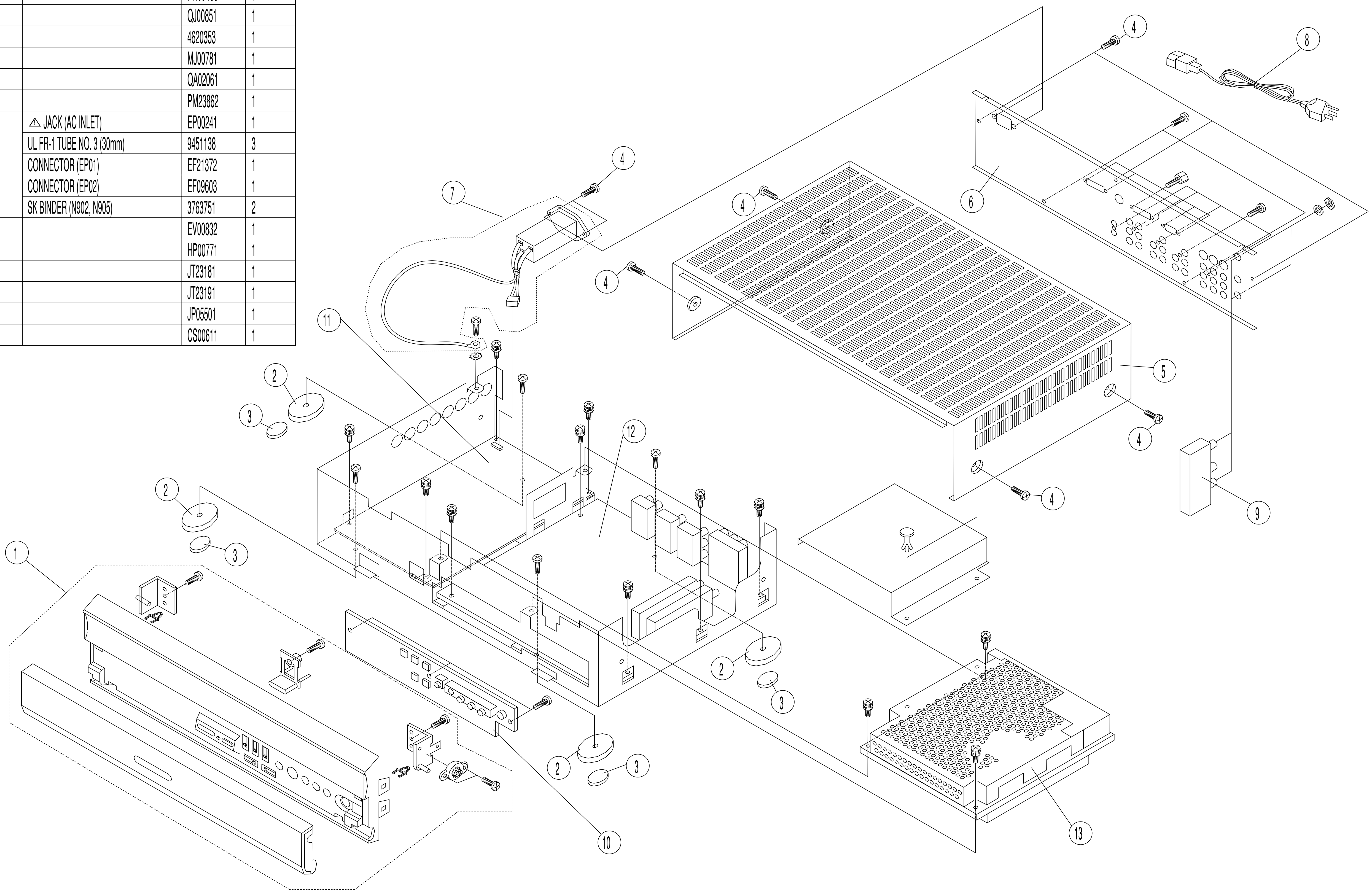
With NAS ferrite core opened, make a loop with EAS1 or EAS2 connectors, wrap the loop on one of the halfs of the core and close the core to hold the loop.
Be carefull not to bite any wire of the connectors.

EXPLODED VIEW

AVC20

AVC20 EXPLODED VIEW PARTS LIST

ITEM	DESCRIPTION	SUB-PARTS	PART NO.	QTY.
1	FRONT PANEL ASSEMBLY		PH09468	1
2	INSULATOR		QJ00851	1
3	LEG CUSHION		4620353	1
4	SCREW 3x8 BRAZIER		MJ00781	1
5	TOP CASE		QA02061	1
6	TERMINAL MTL HDT20		PM23862	1
7	AC INLET ASSEMBLY	⚠ JACK (AC INLET)	EP00241	1
		UL FR-1 TUBE NO. 3 (30mm)	9451138	3
		CONNECTOR (EP01)	EF21372	1
		CONNECTOR (EP02)	EF09603	1
		SK BINDER (N902, N905)	3763751	2
⚠ 8	COD-UL/CSA POWER CORD		EV00832	1
9	ANTENA SWITCH		HP00771	1
10	CONTROL PWB ASSEMBLY		JT23181	1
11	POWER PWB ASSEMBLY		JT23191	1
12	AV PWB ASSEMBLY		JP05501	1
13	HCP091		CS00611	1

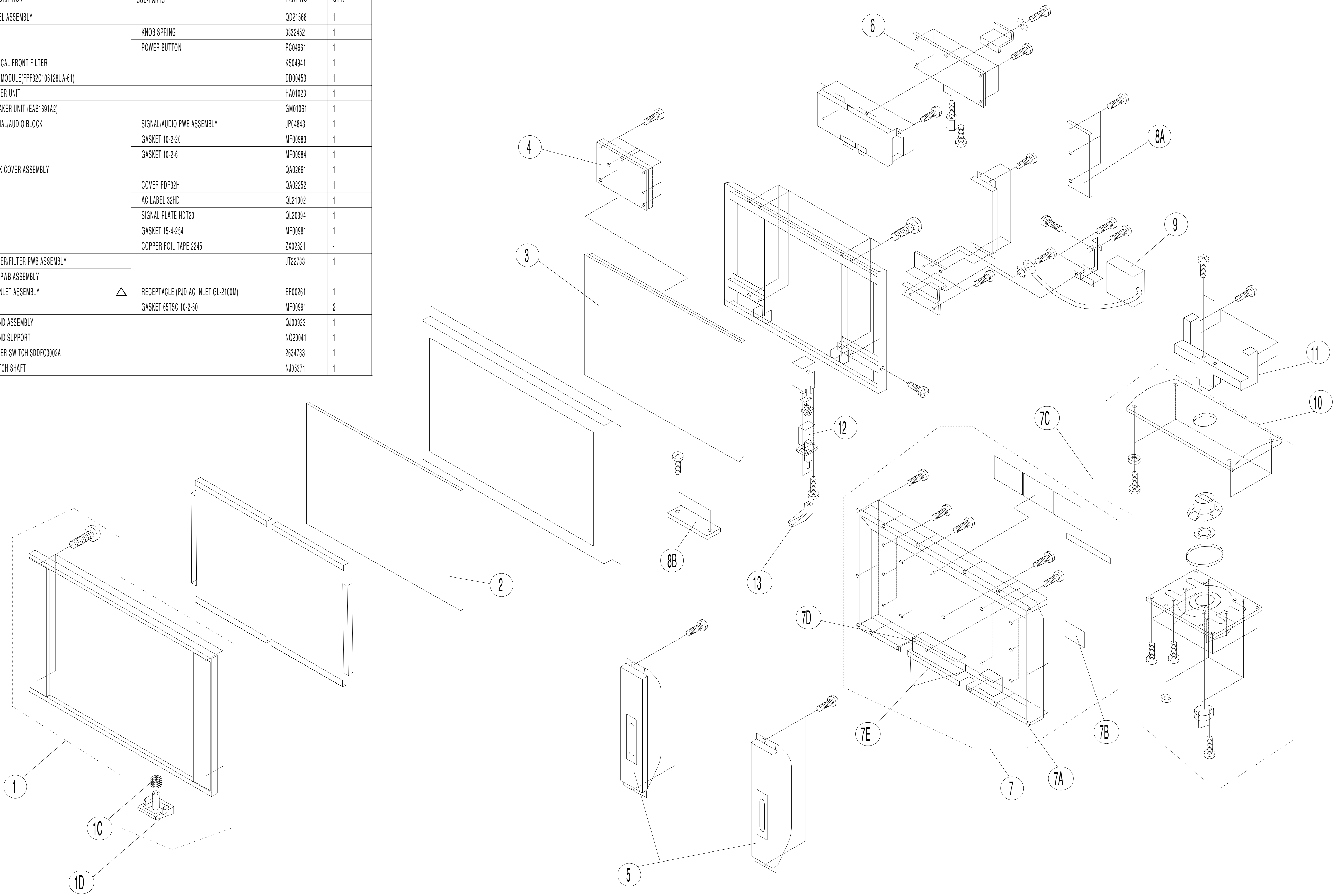


EXPLODED VIEW

32HDT20M

32HDT20M EXPLODED VIEW PARTS LIST

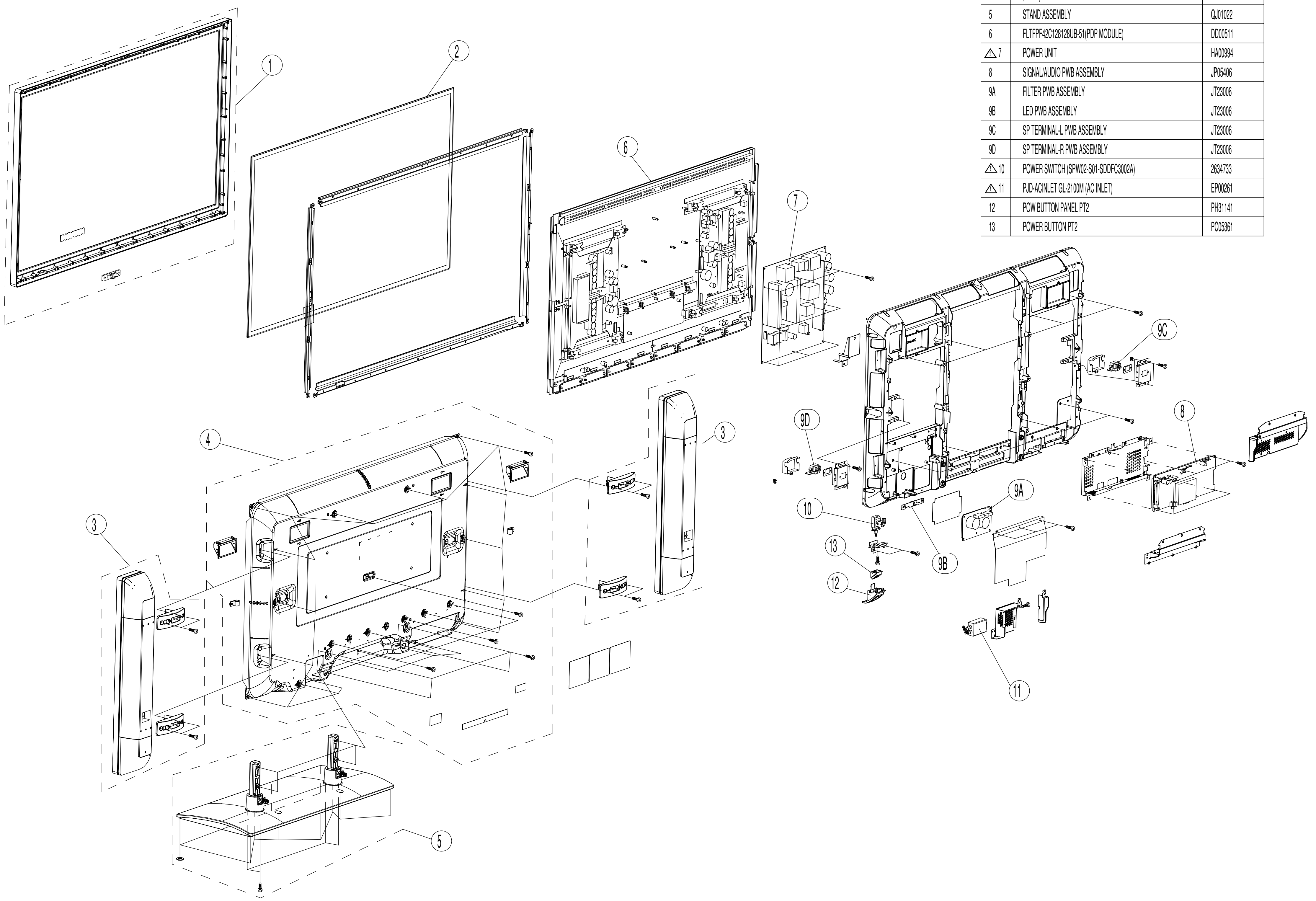
ITEM	DESCRIPTION	SUB-PARTS	PART NO.	QTY.
1	BEZEL ASSEMBLY		QD21568	1
1C		KNOB SPRING	3332452	1
1D		POWER BUTTON	PC04961	1
2	OPTICAL FRONT FILTER		KS04941	1
3	PDP MODULE(FPF32C106128UA-61)		DD00453	1
4	POWER UNIT		HA01023	1
5	SPEAKER UNIT (EAB1691A2)		GM01061	1
6	SIGNAL/AUDIO BLOCK	SIGNAL/AUDIO PWB ASSEMBLY	JP04843	1
6A		GASKET 10-2-20	MF00983	1
6B		GASKET 10-2-6	MF00984	1
7	BACK COVER ASSEMBLY		QA02661	1
7A		COVER PDP32H	QA02252	1
7B		AC LABEL 32HD	QL21002	1
7C		SIGNAL PLATE HDT20	QL20394	1
7D		GASKET 15-4-254	MF00981	1
7E		COPPER FOIL TAPE 2245	ZX02821	-
8A	POWER/FILTER PWB ASSEMBLY		JT22733	1
8B	LED PWB ASSEMBLY			
9	AC INLET ASSEMBLY ⚠	RECEPTACLE (PJD AC INLET GL-2100M)	EP00261	1
		GASKET 65TSC 10-2-50	MF00991	2
10	STAND ASSEMBLY		QJ00923	1
11	STAND SUPPORT		NQ20041	1
⚠12	POWER SWITCH SDDFC3002A		2634733	1
13	SWITCH SHAFT		NJ05371	1



EXPLODED VIEW

42HDT20M

ITEM	DESCRIPTION	PART NO.
1	BEZEL ASSEMBLY	QD33488
2	FRONT FILTER	KS04431
3	SPEAKER UNIT	GM01095
4	(BACK) COVER ASSEMBLY	QA02603
5	STAND ASSEMBLY	QJ01022
6	FLTFPF42C128128UB-51(PDP MODULE)	DD00511
⚠ 7	POWER UNIT	HA00994
8	SIGNAL/AUDIO PWB ASSEMBLY	JP05406
9A	FILTER PWB ASSEMBLY	JT23006
9B	LED PWB ASSEMBLY	JT23006
9C	SP TERMINAL-L PWB ASSEMBLY	JT23006
9D	SP TERMINAL-R PWB ASSEMBLY	JT23006
⚠ 10	POWER SWITCH (SPW02-S01-SDDFC3002A)	2634733
⚠ 11	PJD-ACINLET GL-2100M (AC INLET)	EP00261
12	POW BUTTON PANEL PT2	PH31141
13	POWER BUTTON PT2	PC05361



Replacement Parts List

PRODUCT SERVICE NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

ABBREVIATIONS

Capacitors:
- AL: Aluminum Electrolytic
- CD: Ceramic Disc
- EL: Electrolitic
- PF: Polyester Film
- PP: Polypropylene
- PL: Plastic
- TA: Tantalum
- PR: Paper
- TM: Trimmer
- MC: Mylar

Resistors:
- CF: Carbon Film
- CC: Carbon Composition
- MF: Metal Oxide
- VR: Variable Resistor
- WW: Wire Wound
- FR: Fuse Resistor
- MG: Metal Grazed

Semiconductors:
- TR: Transistor
- DI: Diode
- ZD: Zener Diode
- VA: Varistor
- TH: Termistor
- IC: Integrated Circuit

SYMBOL NO.	PART NO.	PART DESCRIPTION
		AVC20 Control PWB Assembly (P#: JT23181)
		CAPACITORS
CM02	0800325R	CAP.-ELECTRO. 100UF-M 10V
CM03	0890087R	CAP.-CERAMIC 1000PF-K 50V
CM04	0890087R	CAP.-CERAMIC 1000PF-K 50V
		DIODES
DM01	2343561	LED SPR-54MVW
		CONNECTORS
ECONT	2909293	CONNECTOR 10C-B2R0-301
EV3	2909442	CONNECTOR 15C-B2R0-271
		MISCELLANEOUS
JM01	ER00681	HEAD PHONE JACK
JM02	EU00841	TAP-S.JACK
MN01	MN03331	LED SPACER LDT-45B
		TRANSISTORS
QM01	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
		UNITS
HM01	CZ00833	Remote Control Receiver REC.GP1U281R
		RESISTORS
RM04	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RM05	0700038M	RES.-CARBON FLM 1/16W 680-JB
RM06	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RM07	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB
RM08	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
RM09	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RM10	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RM14	0100123M	RES.-CARBON FLM 1/8W 270K-JB
RM15	0100123M	RES.-CARBON FLM 1/8W 270K-JB
RM16	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB
RM20	0700063M	RES.-CARBON FLM 1/16W 47K-JB
RM21	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RM41	0188106M	RES.-CARBON FLM 1/2W 15-J
RM42	0188106M	RES.-CARBON FLM 1/2W 15-J
		SWITCHES
SM01	FE00001R	PUSH SWITCH
SM02	FE00001R	PUSH SWITCH
SM03	FE00001R	PUSH SWITCH
SM04	FE00001R	PUSH SWITCH
SM05	FE00001R	PUSH SWITCH
SM06	FE00001R	PUSH SWITCH
SM07	FE00001R	PUSH SWITCH
		AVC20 Power PWB assembly (P#: JT23191)
		CAPACITORS
⚠ C902	AN01443S	ACROSS CAPA 0.1UF 250V RE104
⚠ C903	AJ00195F	CAP. CERAMIC CK45-F2EA472ZYNN
⚠ C904	AJ00195F	CAP. CERAMIC CK45-F2EA472ZYNN
C905	0284301	CEL-681M251WMT(KMH)
C906	AN01137F	CAP. METALLIZ FILM 0.01UF-J 1.8KV
C907	0800318R	CAP.-ELECTRO. 47UF-M 25V
C908	0800318R	CAP.-ELECTRO. 47UF-M 25V
C909	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C910	AN01111F	1000PF 1800V METALLIZ POLYPROPYLENE FILM CAPA
C912	0890088R	CAP.-CERAMIC 0.0012UF 50V
C915	0244204F	CAP. CERAMIC DE0707R221K2K
⚠ C916	AJ00176F	CAP. CERAMIC CD95-B2GA471KYNS

BACK TO ADJUSTMENTS

Replacement Parts List

PRODUCT SERVICE NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
⚠ C918	AJ00184F	CAP. CERAMIC CD12-E2GA222MYNS			**INTEGRATED CIRCUITS**
C920	0880044R	CAP.-POLYESTER 0.01UF-KEB 50V	⚠ I901	CZ00863	HYBRID IC STR-F6676
C932	AL01858R	1000UF 25V ALUMINIUM ELECTROLYTIC CAPACITOR	⚠ I902	CP07851	MONO IC TLP421
C934	0800329R	CAP.-ELECTRO. 100UF-M(SMG) 50V	⚠ I903	CP07851	MONO IC TLP421
C935	0800332N	CAP.-ELECTRO. 100UF-M 100V	⚠ I904	CP07851	MONO IC TLP421
C937	AL01851R	2200UF 16V ALUMINIUM ELECTROLYTIC CAPACITOR	⚠ I905	CP07851	MONO IC TLP421
C940	AL01851R	2200UF 16V ALUMINIUM ELECTROLYTIC CAPACITOR	I931	CP05941F	IC SI-8050E
C942	0800326R	CAP.-ELECTRO. 100UF-M 16V			
C943	0800353R	CAP.-ELECTRO.470UF-M 16V			**COILS**
C946	0800335R	CAP.-ELECTRO. 220UF-M(SMG) 16V	⚠ L900	BZ02572	COIL LINE FILTER 5.6MH 2.5A
C949	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	⚠ L901	BZ02571	LINE FILTER 1MH 3.5A
C950	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	L903	2125797N	FILT.COIL(LHL08 10UH)
C951	0800318R	CAP.-ELECTRO. 47UF-M 25V	L904	2123462M	FERRITE BEADS CORE B 2.3UH
C952	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	L931	2125815N	FILTER COIL 220UH-K (TYPE LHL08)
C953	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V			
C954	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V			**TRANSISTORS**
C970	0880031R	CAP.-POLY.1000PF-K 50V	Q901	2323782R	THYRISTOR 03P2M
			Q903	2327772M	TRS.2SC3413 TAPE (B/C)
		DIODES	Q931	2318362	TRS. 2SB1274(R) SI
⚠ D901	2342061	DIODE D3SB(A)60.	Q932	2327772M	TRS.2SC3413 TAPE (B/C)
D902	2338531M	DIODE EG-01C (V) SI 0.5A	Q933	2318362	TRS. 2SB1274(R) SI
D903	CH00172M	DIODE DFM1SD2(200V)TAPE	Q934	2327772M	TRS.2SC3413 TAPE (B/C)
D904	2334304M	ZENER RD30E (B3 T2/TP/TA) SI 5MA 30.51V	Q940	2327772M	TRS.2SC3413 TAPE (B/C)
D905	2331795M	ZENER HZ-5 (B2 TAPE) SI 200MA 4.9V	Q941	2325715M	TRS.2SA933S (Q/R)
D906	2337341M	DIODE 1SS270A (TP)	Q944	2323782R	THYRISTOR 03P2M
D907	2337341M	DIODE 1SS270A (TP)			
D909	CH02001M	DIODE 1SR139-400			**RESISTORS**
D910	2337341M	DIODE 1SS270A (TP)	⚠ R900	AT03672M	RES.MTL GRAZD FLM 1/2W 3.3M
D911	CH02001M	DIODE 1SR139-400	R902	0147618	RES.-WIRE WOUND 7W 2.2-KM
D931	2338944	DIODE FML-G12S (F) (200V)	R903	0110389	RES.-MTL OXIDE 3W 68K-J
D932	2349851	DIODE FMB-G16L	R904	0110369S	RES.-MTL. OXIDE FLM 10K-J
D933	2349851	DIODE FMB-G16L	R906	0100037M	RES.-CARBON FLM 1/8W 68-JB
D934	CH00172M	DIODE DFM1SD2(200V)TAPE	R907	0100017M	RES.-CARBON FLM 1/8W 10-JB
D935	CH00172M	DIODE DFM1SD2(200V)TAPE	R908	0700054M	RES.-CARBON FLM 1/16W 10K-JB
D936	2334832M	DIODE EK04V1	R909	0700027M	RES.-CARBON FLM 1/16W 100-JB
D938	CH00151M	DIODE DSM1SD2(200V)TAPE	R910	0148014	RES.WIRE WOUND 2W 0.15 OHM CEMENTED
D939	2331807M	ZENER DIODE HZ-6 TAPE (C1) SI 500MW 6.1V	R911	0700038M	RES.-CARBON FLM 1/16W 680-JB
D940	2337341M	DIODE 1SS270A (TP)	R913	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
D941	2337341M	DIODE 1SS270A (TP)	R915	0100073M	RES.-CARBON FLM 1/8W 2.2K-JB
D942	2337341M	DIODE 1SS270A (TP)	R916	0700054M	RES.-CARBON FLM 1/16W 10K-JB
D943	2337341M	DIODE 1SS270A (TP)	R917	0700061M	RES.-CARBON FLM 1/16W 33K-JB
D950	2337341M	DIODE 1SS270A (TP)	R918	0179536M	RES.-METAL GRAZED FILM 1M J TAPE
D951	2337341M	DIODE 1SS270A (TP)	⚠ R919	AT03676M	RES.MTL GRAZD FLM 1/2W 6.8M
D952	2337341M	DIODE 1SS270A (TP)	R920	0114217M	RESISTOR-CARBON FILM 1/4P 47K-J
D953	2337341M	DIODE 1SS270A (TP)	R931	0700022M	RES.-CARBON FLM 1/16W 39-J
D954	2337341M	DIODE 1SS270A (TP)	R933	0113742M	RES.-CARBON FLM 1/2W 470-JB
D955	2331795M	ZENER HZ-5 (B2 TAPE) SI 200MA 4.9V	R934	0700054M	RES.-CARBON FLM 1/16W 10K-JB
D956	2337341M	DIODE 1SS270A (TP)	R935	0110243S	RES.-MTL OXIDE 2W 820-J
D962	2337341M	DIODE 1SS270A (TP)	R936	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB
D963	2337341M	DIODE 1SS270A (TP)	R937	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB
D964	2337341M	DIODE 1SS270A (TP)	R938	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB
⚠			R939	0700058M	RES.-CARBON FLM 1/16W 22K-JB
		FUSES	R941	0700054M	RES.-CARBON FLM 1/16W 10K-JB
⚠ F900	FN00062	FUSE UL-TSC 005A	R942	0113733M	RES.CARBON FLM SRD1/2P-B 220-J
F902	FN00404	FUSE UL TSC 2.5A N1 125V	R951	0700054M	RES.-CARBON FLM 1/16W 10K-JB
			R952	0700054M	RES.-CARBON FLM 1/16W 10K-JB

Replacement Parts List

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SYMBOL NO.	PART NO.	PART DESCRIPTION
R954	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R955	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R956	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R957	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
R958	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R959	0700027M	RES.-CARBON FLM 1/16W 100-JB
R961	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R962	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
R963	0700058M	RES.-CARBON FLM 1/16W 22K-JB
R964	0700058M	RES.-CARBON FLM 1/16W 22K-JB
R965	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
R966	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R967	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R968	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R969	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R9A3	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R9A4	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
R9A8	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R9A9	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB
R9C1	0700054M	RES.-CARBON FLM 1/16W 10K-JB
		TRANSFORMERS
⚠ T901	BT01911	SWITCHING TRANSFORMER
		MISCELLANEOUS
EP01	EF21372	CONNECTOR
EP02	EF09603	CONNECTOR
ER93	2783981	LEAD PIN L
⚠ J901	EP00241	JACK
NF900	FP00031R	FUSE HOLDER
NF902	FP00031R	FUSE HOLDER
PIP3	2661756	1P PLUG PIN WITH BASE
PP1	ED02801	2P PLUG PIN
PPS1	2902273	PLUGPIN SUB MINI 13P
PPS2	ED01531	PLUG 02BP3R9V-VH(PBT)
ZAC	9374574	UL CSA1007-24HP CODE YELLOW
		AVC20 AV PWB assembly (P#: JP05501)
		CAPACITORS
C001	0800326R	CAP.-ELECTRO. 100UF-M 16V
C002	0893232R	CAP 1608CHIP 100000PF-ZF 25V TAPE
C003	0893208R	CAP 1608CHIP 1000PF-KB 50V TAPE
C004	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V
C005	0893131R	CAP 1608CHIP 220PF-JCH 50V TAPE
C008	0893104R	CAP 1608CHIP 2PF-CCK 50V TAPE
C009	0893245R	CAP 1608CHIP 15000PF-KB 50V TAPE
C013	0893222R	CAP 1608CHIP10000PF-KB 50V TAPE
C014	0893222R	CAP 1608CHIP10000PF-KB 50V TAPE
C015	0893208R	CAP 1608CHIP 1000PF-KB 50V TAPE
C016	0893131R	CAP 1608CHIP 220PF-JCH 50V TAPE
C017	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V
C018	0893209R	CAP 1608CHIP 1200PF-KB 50V TAPE
C019	0893209R	CAP 1608CHIP 1200PF-KB 50V TAPE
C020	0800326R	CAP.-ELECTRO. 100UF-M 16V
C021	0893232R	CAP 1608CHIP 100000PF-ZF 25V TAPE
C022	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C023	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C024	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C025	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C026	0800326R	CAP.-ELECTRO. 100UF-M 16V
C027	0800326R	CAP.-ELECTRO. 100UF-M 16V
C084	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C101	0800352R	CAP.-ELECTRO.470UF 10V
C102	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
C105	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
C107	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
C108	0800352R	CAP.-ELECTRO.470UF 10V
C109	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
C110	0800352R	CAP.-ELECTRO.470UF 10V
C111	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
C114	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
C116	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
C117	0800352R	CAP.-ELECTRO.470UF 10V
C118	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
C119	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C120	0800326R	CAP.-ELECTRO. 100UF-M 16V
C202	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C204	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C205	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C206	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C207	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C208	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
C209	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
C210	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C211	0800326R	CAP.-ELECTRO. 100UF-M 16V
C212	0893205R	CAP 1608CHIP 560PFKB 50V TAPE
C214	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
C215	0893205R	CAP 1608CHIP 560PFKB 50V TAPE
C217	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
C218	0800326R	CAP.-ELECTRO. 100UF-M 16V
C219	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C222	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C223	0800326R	CAP.-ELECTRO. 100UF-M 16V
C224	0893213R	CAP1608CHIP 2200PFKB 50V TAPE
C225	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C227	0800318R	CAP.-ELECTRO. 47UF-M 25V
C228	0893133R	CAP 1608CHIP 330PFJCH 50V TAPE
C229	AA01101R	CERAMIC CAPACITOR(1UF 10V-F)
C230	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)
C231	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C232	0800326R	CAP.-ELECTRO. 100UF-M 16V
C234	0800318R	CAP.-ELECTRO. 47UF-M 25V
C235	0893133R	CAP 1608CHIP 330PFJCH 50V TAPE
C236	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)
C237	AA01101R	CERAMIC CAPACITOR(1UF 10V-F)
C238	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C239	0800326R	CAP.-ELECTRO. 100UF-M 16V
C241	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C242	0800326R	CAP.-ELECTRO. 100UF-M 16V
C243	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C244	0893217R	CAP 1608CHIP 4700PFKB 50V TAPE

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
C252	0893232R	CAP 1608CHIP 100000PFZF25V TAPE	C902	AL00796S	CAP.ELECTORO. 1200UF-M 35V
C253	0893232R	CAP 1608CHIP 100000PFZF25V TAPE	C903	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C254	0893232R	CAP 1608CHIP 100000PFZF25V TAPE	C904	AL00796S	CAP.ELECTORO. 1200UF-M 35V
C255	0800326R	CAP.-ELECTRO. 100UF-M 16V	C905	0800358R	CAP.-ELECTRO. 1000UF-M 6.3V
C256	0893232R	CAP 1608CHIP 100000PFZF25V TAPE	C906	AL00796S	CAP.ELECTORO. 1200UF-M 35V
C257	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C907	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C258	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C908	AL00796S	CAP.ELECTORO. 1200UF-M 35V
C259	AA00931R	CAP. CERAMIC 2012 (1UF 10V)	C910	0800326R	CAP.-ELECTRO. 100UF-M 16V
C260	0893232R	CAP 1608CHIP 100000PFZF25V TAPE	C914	0800326R	CAP.-ELECTRO. 100UF-M 16V
C261	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C918	0800326R	CAP.-ELECTRO. 100UF-M 16V
C262	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C922	0800326R	CAP.-ELECTRO. 100UF-M 16V
C263	AA00931R	CAP. CERAMIC 2012 (1UF 10V)	C923	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C264	0800326R	CAP.-ELECTRO. 100UF-M 16V	C926	0800326R	CAP.-ELECTRO. 100UF-M 16V
C268	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	C927	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C269	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	C930	0800326R	CAP.-ELECTRO. 100UF-M 16V
C270	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	C931	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C271	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	C933	0800326R	CAP.-ELECTRO. 100UF-M 16V
C272	0893208R	CAP 1608CHIP 1000PFKB 50V TAPE	C934	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C273	0893208R	CAP 1608CHIP 1000PFKB 50V TAPE	C939	0800326R	CAP.-ELECTRO. 100UF-M 16V
C401	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	C940	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C402	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)	C941	0800326R	CAP.-ELECTRO. 100UF-M 16V
C402A	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)	C942	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C403	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	C943	0800326R	CAP.-ELECTRO. 100UF-M 16V
C404	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)	C944	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C404A	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)	C945	0800326R	CAP.-ELECTRO. 100UF-M 16V
C405	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	C946	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C406	0800326R	CAP.-ELECTRO. 100UF-M 16V	C947	0800326R	CAP.-ELECTRO. 100UF-M 16V
C407	0893232R	CAP 1608CHIP 100000PFZF25V TAPE	C948	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C408	0893232R	CAP 1608CHIP 100000PFZF25V TAPE	C949	0800326R	CAP.-ELECTRO. 100UF-M 16V
C409	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	C950	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C409A	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	C951	AL01153S	CAP.ELECTR. 1000UF-M 35V
C410	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	C952	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C410A	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	C953	0893232R	CAP 1608CHIP 100000PFZF25V TAPE
C411	0284634R	CAP.-ELECTRO 4.7UF-SME(BP) 50V	CV01	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
C411A	0284634R	CAP.-ELECTRO 4.7UF-SME(BP) 50V	CV02	0800326R	CAP.-ELECTRO. 100UF-M 16V
C412	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)	CV03	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C412A	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)	CV05	0893111R	CAP 1608CHIP 8PFCCH 50V TAPE
C413	0800288R	CAP.-ELECTRO. 4.7UF-M(SMG) 50V	CV06	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
C414	0893232R	CAP 1608CHIP 100000PFZF25V TAPE	CV08	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
C415	0800326R	CAP.-ELECTRO. 100UF-M 16V	CV09	0800326R	CAP.-ELECTRO. 100UF-M 16V
C416	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	CV10	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
C417	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	CV11	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
C418	0893232R	CAP 1608CHIP 100000PFZF25V TAPE	CV12	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
C419	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)	CV13	0800326R	CAP.-ELECTRO. 100UF-M 16V
C419A	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)	CV14	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
C420	0800352R	CAP.-ELECTRO.470UF 10V	CV15	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
C420A	0800352R	CAP.-ELECTRO.470UF 10V	CV16	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
C421	0800326R	CAP.-ELECTRO. 100UF-M 16V	CV17	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
C422	0893232R	CAP 1608CHIP 100000PFZF25V TAPE	CV18	0800352R	CAP.-ELECTRO.470UF 10V
C423	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	CV19	0893129R	CAP 1608CHIP 180PFJCH 50V TAPE
C424	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)	CV20	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
C425	0893232R	CAP 1608CHIP 100000PFZF25V TAPE	CV21	0893127R	CAP 1608CHIP 120PFJCH 50V TAPE
C426	0800352R	CAP.-ELECTRO.470UF 10V	CV22	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)
C427	0800344R	CAP.-ELECTRO. 330UF-M(SMG) 16V	CV23	0800318R	CAP.-ELECTRO. 47UF-M 25V
C428	0800309R	CAP.-ELECTRO 33UF-M(SMG) 25V	CV24	0893118R	CAP 1608CHIP 27PFJCH 50V TAPE
C901	0800358R	CAP.-ELECTRO. 1000UF-M 6.3V	CV25	0893115R	CAP 1608CHIP 15PFJCH 50V TAPE

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
CV26	0893111R	CAP 1608CHIP 8PFCCH 50V TAPE	CW61	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
CV27	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	CW62	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
CV28	0800326R	CAP.-ELECTRO. 100UF-M 16V	CW63	0800326R	CAP.-ELECTRO. 100UF-M 16V
CW01	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	CW64	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
CW02	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)	CW65	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
CW03	0893115R	CAP 1608CHIP 15PFJCH 50V TAPE	CW66	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
CW04	0893123R	CAP 1608CHIP 56PFJCH 50V TAPE	CX01	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)
CW05	0893115R	CAP 1608CHIP 15PFJCH 50V TAPE	CX02	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)
CW06	AA00362R	CAP.CHIP-CERAMIC 2.2UF 16V TAPE	CX03	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)
CW07	AA00362R	CAP.CHIP-CERAMIC 2.2UF 16V TAPE	CX04	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)
CW08	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	CX05	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)
CW09	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	CX06	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)
CW10	0800326R	CAP.-ELECTRO. 100UF-M 16V	CX07	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)
CW11	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	CX08	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)
CW12	AA00358R	CAP 3216 CHIP 1.0UFKB 16V TAPE	CX09	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
CW13	0893204R	CAP 1608CHIP 470PFKB 50V TAPE	CX10	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)
CW14	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	CX11	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)
CW15	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)	CX12	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)
CW16	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	CX13	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)
CW17	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	CX14	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
CW18	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)	CX15	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
CW19	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	CX16	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
CW20	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	CX17	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
CW21	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	CX18	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
CW22	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	CX19	0800326R	CAP.-ELECTRO. 100UF-M 16V
CW23	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	CX20	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
CW24	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)	CX21	0800352R	CAP.-ELECTRO.470UF 10V
CW26	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	CX22	0800352R	CAP.-ELECTRO.470UF 10V
CW27	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	CX23	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
CW28	0893119R	CAP 1608CHIP 33PFJCH 50V TAPE	CX28	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)
CW29	0800326R	CAP.-ELECTRO. 100UF-M 16V	CX29	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)
CW30	0893111R	CAP 1608CHIP 8PFCCH 50V TAPE	CX30	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)
CW31	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	CX31	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)
CW32	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	CX32	0800326R	CAP.-ELECTRO. 100UF-M 16V
CW33	0893119R	CAP 1608CHIP 33PFJCH 50V TAPE	CX33	0800326R	CAP.-ELECTRO. 100UF-M 16V
CW34	0800326R	CAP.-ELECTRO. 100UF-M 16V	CX36	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
CW39	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)	CX37	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
CW40	AA00964R	CERAMIC CAPACITOR(2.2UF 6.3V)	CX38	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)
CW41	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	CX39	0800326R	CAP.-ELECTRO. 100UF-M 16V
CW42	0800326R	CAP.-ELECTRO. 100UF-M 16V	CX40	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
CW43	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	CX42	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
CW44	0800326R	CAP.-ELECTRO. 100UF-M 16V	CX43	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)
CW45	0893208R	CAP 1608CHIP 1000PFKB 50V TAPE	CX44	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)
CW48	0800326R	CAP.-ELECTRO. 100UF-M 16V	CX45	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)
CW49	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	CX46	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)
CW50	0893115R	CAP 1608CHIP 15PFJCH 50V TAPE	CX49	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)
CW51	0893123R	CAP 1608CHIP 56PFJCH 50V TAPE	CX52	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
CW52	0893115R	CAP 1608CHIP 15PFJCH 50V TAPE	CX53	0800326R	CAP.-ELECTRO. 100UF-M 16V
CW53	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	CX54	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)
CW54	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	CX55	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
CW55	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	CX56	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
CW56	0800326R	CAP.-ELECTRO. 100UF-M 16V	CX57	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)
CW57	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	CX58	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)
CW58	0800326R	CAP.-ELECTRO. 100UF-M 16V	CX59	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)
CW59	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	CX60	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)
CW60	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	CX61	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)

Replacement Parts List

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
CX62	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)	CZ42	0893123R	CAP 1608CHIP 56PFJCH 50V TAPE
CX63	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)	CZ43	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
CX64	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)	CZ44	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
CX65	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)	CZ45	0800326R	CAP.-ELECTRO. 100UF-M 16V
CX66	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)	CZ46	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
CX67	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)	CZ47	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
CX68	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)	CZ48	0893123R	CAP 1608CHIP 56PFJCH 50V TAPE
CX69	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)	CZ49	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
CX70	0800326R	CAP.-ELECTRO. 100UF-M 16V	CZ50	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
CX71	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE			
CX74	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE			**DIODES**
CX77	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	D101	2339971M	ZENER HZS33-1 TA
CX78	0800326R	CAP.-ELECTRO. 100UF-M 16V	D102	2339971M	ZENER HZS33-1 TA
CX79	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	D201	CH02021M	DIODE 1SS133 T-72
CX80	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	D202	CH02021M	DIODE 1SS133 T-72
CX81	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)	D203	CH02021M	DIODE 1SS133 T-72
CX82	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)	D205	CH02021M	DIODE 1SS133 T-72
CX83	0893131R	CAP 1608CHIP 220PFJCH 50V TAPE	D206	CH02021M	DIODE 1SS133 T-72
CX84	0893131R	CAP 1608CHIP 220PFJCH 50V TAPE	D207	CH02021M	DIODE 1SS133 T-72
CZ01	0800326R	CAP.-ELECTRO. 100UF-M 16V	D208	CH02021M	DIODE 1SS133 T-72
CZ02	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	D209	CH02021M	DIODE 1SS133 T-72
CZ03	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	D210	CH02021M	DIODE 1SS133 T-72
CZ04	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	D211	CH02021M	DIODE 1SS133 T-72
CZ05	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	D401	2331771M	ZENER HZ-3A1 TAPE
CZ06	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	D401A	2331771M	ZENER HZ-3A1 TAPE
CZ07	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	D402	CH02021M	DIODE 1SS133 T-72
CZ10	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	D403	2331771M	ZENER HZ-3A1 TAPE
CZ11	0800326R	CAP.-ELECTRO. 100UF-M 16V	D403A	2331771M	ZENER HZ-3A1 TAPE
CZ12	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	D404	2348112M	ZENER DIODE MTZ-J5.6B
CZ13	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	D405	CH02021M	DIODE 1SS133 T-72
CZ14	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	D406	CH02021M	DIODE 1SS133 T-72
CZ15	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	D407	2344041M	DIODE 1SS254TA/1SS270TA
CZ16	0800326R	CAP.-ELECTRO. 100UF-M 16V	D408	CH02021M	DIODE 1SS133 T-72
CZ17	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	D901	2339541G	DIODE RK34LF-A1
CZ18	0800282R	CAP.-ELECTORO. 2.2UF-M(SMG) 50V	D911	2339541G	DIODE RK34LF-A1
CZ19	0893213R	CAP1608CHIP 2200PFKB 50V TAPE	DX01	2331771M	ZENER HZ-3A1 TAPE
CZ20	0893114R	CAP 1608CHIP 12PFJCH 50V TAPE	DX02	2331771M	ZENER HZ-3A1 TAPE
CZ21	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	DX03	CH02021M	DIODE 1SS133 T-72
CZ22	0800326R	CAP.-ELECTRO. 100UF-M 16V	DX06	CH02021M	DIODE 1SS133 T-72
CZ23	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	DX07	CH02021M	DIODE 1SS133 T-72
CZ24	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	DZ01	CH02021M	DIODE 1SS133 T-72
CZ25	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	DZ02	CH02021M	DIODE 1SS133 T-72
CZ26	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	DZ03	CH02021M	DIODE 1SS133 T-72
CZ27	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	DZ04	CH02021M	DIODE 1SS133 T-72
CZ28	0893222R	CAP 1608CHIP10000PFKB 50V TAPE			
CZ31	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE			**UNITS**
CZ32	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	U101	HC00511	Main Tuner ENGE6106D
CZ33	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	U102	HC00462	PIP Tuner ENG36614G
CZ34	0893222R	CAP 1608CHIP10000PFKB 50V TAPE			
CZ35	0800326R	CAP.-ELECTRO. 100UF-M 16V			**INTEGRATED CIRCUITS**
CZ36	0800282R	CAP.-ELECTORO. 2.2UF-M(SMG) 50V	I001	CK37371U	M306V3MG-XXXFP
CZ37	0893213R	CAP1608CHIP 2200PFKB 50V TAPE	I002	CK37051R	ANALOG MONOLITHIC IC(BD4729G)
CZ38	0893114R	CAP 1608CHIP 12PFJCH 50V TAPE	I003	CK35894R	IC CAT24WC32J1
CZ39	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	I201	CK31992R	IC BU4053BCF
CZ40	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	I202	CK37411R	IR BLASTER MASK S3C80F7
CZ41	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	I203	CK32271R	DIGITAL MONOLITHIC IC (MC74VHCT244ADTR2)

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
I204	CK31992R	IC BU4053BCF	LW01	2130421R	COIL CHIP 33-J
I206	CK32271R	DIGITAL MONOLITHIC IC (MC74VHCT244ADTR2)	LW02	2130421R	COIL CHIP 33-J
I207	CK01172R	HD74HC221FPEL	LW03	0773094R	COIL HCC101K32CT
I401	CK31991R	ANALOG MONOLITHIC IC BU4052BCF-E2	LW04	0773094R	COIL HCC101K32CT
I402	CP02601	AN5285K	LW05	0773094R	COIL HCC101K32CT
I403	CK31031R	IC BA3530FS-E2	LW06	0773094R	COIL HCC101K32CT
I901	CZ00512U	IC PQ1CF2	LW07	0773092R	COIL HCC470K32CT
I902	CP03921F	ANALOG MONOLITHIC IC (SI-8033S)	LW08	0773094R	COIL HCC101K32CT
I906	CK37192R	MONO IC SI-3025LSA-TL	LW10	0773094R	COIL HCC101K32CT
I907	CK37194R	MONO IC SI-3050LSA-TL	LW11	2130421R	COIL CHIP 33-J
I909	CK37194R	MONO IC SI-3050LSA-TL	LW12	2130421R	COIL CHIP 33-J
I911	CK37193R	MONO IC SI-3033LSA-TL	LW13	0773094R	COIL HCC101K32CT
I912	CZ00705R	ANALOG MONOLITHIC IC (BA09SFP-E2)	LW14	0773092R	COIL HCC470K32CT
I913	CZ00705R	ANALOG MONOLITHIC IC (BA09SFP-E2)	LW15	0773094R	COIL HCC101K32CT
I914	CZ00705R	ANALOG MONOLITHIC IC (BA09SFP-E2)	LX01	0773092R	COIL HCC470K32CT
I915	CZ00705R	ANALOG MONOLITHIC IC (BA09SFP-E2)	LX02	0773094R	COIL HCC101K32CT
I916	CZ00705R	ANALOG MONOLITHIC IC (BA09SFP-E2)	LX03	0773092R	COIL HCC470K32CT
I917	CZ00705R	ANALOG MONOLITHIC IC (BA09SFP-E2)	LX04	0773092R	COIL HCC470K32CT
IV01	CK07631R	DIGITAL MONOLITHIC IC (TC90A45F)	LX05	0773094R	COIL HCC101K32CT
IW01	CK36951U	3D Y/C SEP IC UPD64083GF-3BA	LX06	0773094R	COIL HCC101K32CT
IW02	CK06097R	ANALOG MONOLITHIC IC(PST9127NR)	LX07	0773094R	COIL HCC101K32CT
IX01	CK30941U	IC CXA2069Q	LZ01	0773092R	COIL HCC470K32CT
IX02	CK34811U	IC MM1519XQ	LZ02	0773092R	COIL HCC470K32CT
IZ01	CK36961R	IC TA1340F	LZ03	0773092R	COIL HCC470K32CT
IZ02	CK36961R	IC TA1340F	LZ04	2130418R	HLM-220JCNT
			LZ05	0773092R	COIL HCC470K32CT
		COILS	LZ06	2130418R	HLM-220JCNT
L001	0773094R	COIL HCC101K32CT	LZ08	0773094R	COIL HCC101K32CT
L101	0773092R	COIL HCC470K32CT	LZ09	0773094R	COIL HCC101K32CT
L102	0773092R	COIL HCC470K32CT			
L103	0773087R	COIL HCC100K32CT			**TRANSISTORS**
L104	0773087R	COIL HCC100K32CT	Q001	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
L105	0773087R	COIL HCC100K32CT	Q101	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
L110	BH01341M	COIL FERRITE BEADS 0.8UH	Q102	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
L111	BH01341M	COIL FERRITE BEADS 0.8UH	Q103	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
L112	BH01341M	COIL FERRITE BEADS 0.8UH	Q104	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
L203	0773094R	COIL HCC101K32CT	Q105	2320663M	TRS. 2SC1213A (C)
L204	0773081R	CHIP COIL HCC1R0M32CT	Q202	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
L206	0773094R	COIL HCC101K32CT	Q203	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
L207	0773094R	COIL HCC101K32CT	Q204	CA11271R	TRS 2SA1037AK T146 RS
L208	0773094R	COIL HCC101K32CT	Q205	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
L210	0773081R	CHIP COIL HCC1R0M32CT	Q206	CA11271R	TRS 2SA1037AK T146 RS
L901	BH00201R	FILTER COIL 10UH	Q207	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
L902	BV00931	CHOKE COIL 200UH 2A	Q208	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
L903	0773094R	COIL HCC101K32CT	Q209	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
L904	BH00201R	FILTER COIL 10UH	Q210	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
L905	BV00931	CHOKE COIL 200UH 2A	Q211	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
L906	0773092R	COIL HCC470K32CT	Q212	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
L907	0773094R	COIL HCC101K32CT	Q213	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
L908	0773087R	COIL HCC100K32CT	Q214	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
LV01	0773094R	COIL HCC101K32CT	Q215	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
LV02	0773094R	COIL HCC101K32CT	Q216	CA11271R	TRS 2SA1037AK T146 RS
LV03	0773092R	COIL HCC470K32CT	Q217	CA11271R	TRS 2SA1037AK T146 RS
LV04	0773092R	COIL HCC470K32CT	Q218	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
LV05	0773094R	COIL HCC101K32CT	Q219	CA11271R	TRS 2SA1037AK T146 RS
LV06	2130416R	COIL CHIP 15-J	Q220	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
Q221	CA11271R	TRS 2SA1037AK T146 RS	Q907	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q222	CA11271R	TRS 2SA1037AK T146 RS	QV01	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q223	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QV02	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q224	CA11271R	TRS 2SA1037AK T146 RS	QV03	CA11271R	TRS 2SA1037AK T146 RS
Q225	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QV04	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q227	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QV05	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q228	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QV06	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q231	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QV07	CA11271R	TRS 2SA1037AK T146 RS
Q232	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QV08	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q233	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QV09	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q234	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QV10	CA11271R	TRS 2SA1037AK T146 RS
Q235	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QW01	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q236	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QW02	CA11271R	TRS 2SA1037AK T146 RS
Q241	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QW03	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q242	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QW04	CA11271R	TRS 2SA1037AK T146 RS
Q243	CA11271R	TRS 2SA1037AK T146 RS	QW05	CA11271R	TRS 2SA1037AK T146 RS
Q244	CA11271R	TRS 2SA1037AK T146 RS	QW06	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q245	CA11271R	TRS 2SA1037AK T146 RS	QW07	CA11271R	TRS 2SA1037AK T146 RS
Q246	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QW08	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q247	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QW09	CA11271R	TRS 2SA1037AK T146 RS
Q248	CF02771R	TRS. KTA1270	QW10	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q249	CF02771R	TRS. KTA1270	QW11	CA11271R	TRS 2SA1037AK T146 RS
Q250	CA11271R	TRS 2SA1037AK T146 RS	QW12	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q251	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QW13	CA11271R	TRS 2SA1037AK T146 RS
Q252	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QW14	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q253	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QW15	CA11271R	TRS 2SA1037AK T146 RS
Q254	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QW17	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q401	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QW18	CA11271R	TRS 2SA1037AK T146 RS
Q401A	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QX01	CA00461R	TRS.CHIP 2SD2114K 20V TAPE
Q402	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QX02	CA00461R	TRS.CHIP 2SD2114K 20V TAPE
Q402A	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QX03	2320663M	TRS. 2SC1213A (C)
Q403	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QX04	2320663M	TRS. 2SC1213A (C)
Q403A	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QX05	2320663M	TRS. 2SC1213A (C)
Q404	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QX08	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q405	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QX12	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q406	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QX13	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q406A	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QX14	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q407	CA00461R	TRS.CHIP 2SD2114K 20V TAPE	QX15	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q407A	CA00461R	TRS.CHIP 2SD2114K 20V TAPE	QX16	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q408	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QX17	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q408A	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QX19	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q409	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QX20	CA11271R	TRS 2SA1037AK T146 RS
Q409A	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QX21	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q410	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QX22	CA11271R	TRS 2SA1037AK T146 RS
Q411	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QX23	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q411A	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QX24	CA11271R	TRS 2SA1037AK T146 RS
Q412	CA11271R	TRS 2SA1037AK T146 RS	QX25	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q412A	CA11271R	TRS 2SA1037AK T146 RS	QX26	CA11271R	TRS 2SA1037AK T146 RS
Q413	CA11271R	TRS 2SA1037AK T146 RS	QX27	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q414	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QX28	CA11271R	TRS 2SA1037AK T146 RS
Q415	CA11271R	TRS 2SA1037AK T146 RS	QX29	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q416	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QX30	CA11271R	TRS 2SA1037AK T146 RS
Q901	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QX31	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q902	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QX32	CA11271R	TRS 2SA1037AK T146 RS
Q903	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	QX33	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)
Q906	CK34781R	IC UPA1710AG	QX34	CA11271R	TRS 2SA1037AK T146 RS

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
QX37	CA11271R	TRS 2SA1037AK T146 RS	R031	0790037R	RES.CHIP 1/16W 1.0K OHM
QX38	CA11271R	TRS 2SA1037AK T146 RS	R032	0790037R	RES.CHIP 1/16W 1.0K OHM
QZ01	CA11271R	TRS 2SA1037AK T146 RS	R033	0790037R	RES.CHIP 1/16W 1.0K OHM
QZ02	CA11271R	TRS 2SA1037AK T146 RS	R034	0790037R	RES.CHIP 1/16W 1.0K OHM
QZ03	CA11271R	TRS 2SA1037AK T146 RS	R037	0790024R	RES.CHIP 1/16W 100 OHM
QZ04	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	R038	0790024R	RES.CHIP 1/16W 100 OHM
QZ05	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	R039	0790051R	RES.CHIP 1/16W 10K OHM
QZ06	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	R040	0790052R	RES.CHIP 1/16W 12K OHM
QZ07	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	R041	0790037R	RES.CHIP 1/16W 1.0K OHM
QZ08	CA11271R	TRS 2SA1037AK T146 RS	R042	0790024R	RES.CHIP 1/16W 100 OHM
QZ09	CA11271R	TRS 2SA1037AK T146 RS	R043	0790037R	RES.CHIP 1/16W 1.0K OHM
QZ10	CA11271R	TRS 2SA1037AK T146 RS	R044	0790051R	RES.CHIP 1/16W 10K OHM
QZ11	CA11271R	TRS 2SA1037AK T146 RS	R045	0790037R	RES.CHIP 1/16W 1.0K OHM
QZ12	CA11271R	TRS 2SA1037AK T146 RS	R046	0790037R	RES.CHIP 1/16W 1.0K OHM
QZ13	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	R047	0790037R	RES.CHIP 1/16W 1.0K OHM
QZ14	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	R048	0790037R	RES.CHIP 1/16W 1.0K OHM
QZ15	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	R049	0790059R	RES.CHIP 1/16W 47K OHM
QZ16	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	R050	0790034R	RES.CHIP 1/16W 560 OHM
QZ17	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	R051	0790028R	RES.CHIP 1/16W 220 OHM
QZ18	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	R052	0790028R	RES.CHIP 1/16W 220 OHM
QZ19	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	R053	0790024R	RES.CHIP 1/16W 100 OHM
QZ21	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	R054	0790037R	RES.CHIP 1/16W 1.0K OHM
QZ22	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	R055	0790024R	RES.CHIP 1/16W 100 OHM
QZ27	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	R056	0790024R	RES.CHIP 1/16W 100 OHM
QZ28	2325691R	TRS CHIP 2SC2412K(Q/R TYPE)	R058	0790037R	RES.CHIP 1/16W 1.0K OHM
			R059	0790037R	RES.CHIP 1/16W 1.0K OHM
		RESISTORS	R060	0790024R	RES.CHIP 1/16W 100 OHM
R001	0790037R	RES.CHIP 1/16W 1.0K OHM	R061	0790024R	RES.CHIP 1/16W 100 OHM
R002	0790059R	RES.CHIP 1/16W 47K OHM	R063	0790051R	RES.CHIP 1/16W 10K OHM
R003	0790024R	RES.CHIP 1/16W 100 OHM	R064	0790024R	RES.CHIP 1/16W 100 OHM
R004	0790059R	RES.CHIP 1/16W 47K OHM	R065	0790037R	RES.CHIP 1/16W 1.0K OHM
R005	0790024R	RES.CHIP 1/16W 100 OHM	R071	0790037R	RES.CHIP 1/16W 1.0K OHM
R006	0790024R	RES.CHIP 1/16W 100 OHM	R072	0790037R	RES.CHIP 1/16W 1.0K OHM
R007	0790037R	RES.CHIP 1/16W 1.0K OHM	R073	0790037R	RES.CHIP 1/16W 1.0K OHM
R008	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R074	0790037R	RES.CHIP 1/16W 1.0K OHM
R009	0790051R	RES.CHIP 1/16W 10K OHM	R075	0790037R	RES.CHIP 1/16W 1.0K OHM
R010	0790024R	RES.CHIP 1/16W 100 OHM	R076	0790037R	RES.CHIP 1/16W 1.0K OHM
R011	0790024R	RES.CHIP 1/16W 100 OHM	R077	0790024R	RES.CHIP 1/16W 100 OHM
R012	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R078	0790037R	RES.CHIP 1/16W 1.0K OHM
R013	0790037R	RES.CHIP 1/16W 1.0K OHM	R079	0790024R	RES.CHIP 1/16W 100 OHM
R015	0790024R	RES.CHIP 1/16W 100 OHM	R080	0790051R	RES.CHIP 1/16W 10K OHM
R016	0790024R	RES.CHIP 1/16W 100 OHM	R081	0790051R	RES.CHIP 1/16W 10K OHM
R017	0790024R	RES.CHIP 1/16W 100 OHM	R082	0790047R	RES.CHIP 1/16W 5.6K OHM
R018	0790024R	RES.CHIP 1/16W 100 OHM	R083	0790028R	RES.CHIP 1/16W 220 OHM
R019	0790024R	RES.CHIP 1/16W 100 OHM	R084	0790024R	RES.CHIP 1/16W 100 OHM
R020	0790051R	RES.CHIP 1/16W 10K OHM	R085	0790024R	RES.CHIP 1/16W 100 OHM
R021	0790051R	RES.CHIP 1/16W 10K OHM	R086	0790037R	RES.CHIP 1/16W 1.0K OHM
R022	0790051R	RES.CHIP 1/16W 10K OHM	R087	0790037R	RES.CHIP 1/16W 1.0K OHM
R023	0790051R	RES.CHIP 1/16W 10K OHM	R088	0790037R	RES.CHIP 1/16W 1.0K OHM
R024	0790024R	RES.CHIP 1/16W 100 OHM	R089	0790037R	RES.CHIP 1/16W 1.0K OHM
R025	0790024R	RES.CHIP 1/16W 100 OHM	R090	0790051R	RES.CHIP 1/16W 10K OHM
R026	0790024R	RES.CHIP 1/16W 100 OHM	R091	0790051R	RES.CHIP 1/16W 10K OHM
R027	0790024R	RES.CHIP 1/16W 100 OHM	R092	0790051R	RES.CHIP 1/16W 10K OHM
R028	0790037R	RES.CHIP 1/16W 1.0K OHM	R094	0790024R	RES.CHIP 1/16W 100 OHM
R029	0790037R	RES.CHIP 1/16W 1.0K OHM	R095	0790024R	RES.CHIP 1/16W 100 OHM
R030	0790037R	RES.CHIP 1/16W 1.0K OHM	R096	0790024R	RES.CHIP 1/16W 100 OHM

Replacement Parts List

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R097	0790047R	RES.CHIP 1/16W 5.6K OHM	R129	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R098	0790038R	RES.CHIP 1/16W 1.2K OHM	R131	0790028R	RES.CHIP 1/16W 220 OHM
R099	0790037R	RES.CHIP 1/16W 1.0K OHM	R132	0790028R	RES.CHIP 1/16W 220 OHM
R0A1	0790033R	RES.CHIP 1/16W 470 OHM	R133	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R0A2	0790077R	RES.CHIP 1/16W 1.0M OHM	R134	0790037R	RES.CHIP 1/16W 1.0K OHM
R0A3	0790033R	RES.CHIP 1/16W 470 OHM	R135	0790037R	RES.CHIP 1/16W 1.0K OHM
R0A4	0790077R	RES.CHIP 1/16W 1.0M OHM	R136	0790055R	RES.CHIP 1/16W 22K OHM
R0A5	0790037R	RES.CHIP 1/16W 1.0K OHM	R137	0790059R	RES.CHIP 1/16W 47K OHM
R0A6	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R138	0790051R	RES.CHIP 1/16W 10K OHM
R0A7	0790051R	RES.CHIP 1/16W 10K OHM	R139	0790024R	RES.CHIP 1/16W 100 OHM
R0A8	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R204	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R0A9	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R205	0790024R	RES.CHIP 1/16W 100 OHM
R0B5	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R207	0790064R	RES.CHIP 1/16W 100K OHM
R0C2	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R208	0790047R	RES.CHIP 1/16W 5.6K OHM
R0C4	0790037R	RES.CHIP 1/16W 1.0K OHM	R209	0790037R	RES.CHIP 1/16W 1.0K OHM
R0C5	0790037R	RES.CHIP 1/16W 1.0K OHM	R210	0790037R	RES.CHIP 1/16W 1.0K OHM
R0C6	0790037R	RES.CHIP 1/16W 1.0K OHM	R211	0790064R	RES.CHIP 1/16W 100K OHM
R0C7	0790037R	RES.CHIP 1/16W 1.0K OHM	R212	0790047R	RES.CHIP 1/16W 5.6K OHM
R0C8	0790055R	RES.CHIP 1/16W 22K OHM	R213	0790069R	RES.CHIP 1/16W 270K OHM
R0C9	0790024R	RES.CHIP 1/16W 100 OHM	R214	0790024R	RES.CHIP 1/16W 100 OHM
R0D1	0790059R	RES.CHIP 1/16W 47K OHM	R215	0790051R	RES.CHIP 1/16W 10K OHM
R0D3	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R216	0790037R	RES.CHIP 1/16W 1.0K OHM
R0D4	0790024R	RES.CHIP 1/16W 100 OHM	R217	0790042R	RES.CHIP 1/16W 2.2K OHM
R0D5	0790024R	RES.CHIP 1/16W 100 OHM	R218	0790024R	RES.CHIP 1/16W 100 OHM
R0D6	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R219	0790051R	RES.CHIP 1/16W 10K OHM
R0D7	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R220	0790037R	RES.CHIP 1/16W 1.0K OHM
R0D8	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R221	0790042R	RES.CHIP 1/16W 2.2K OHM
R0D9	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R222	0790024R	RES.CHIP 1/16W 100 OHM
R0E1	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R224	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R0E2	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R225	0790024R	RES.CHIP 1/16W 100 OHM
R0E3	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R227	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R101	0790037R	RES.CHIP 1/16W 1.0K OHM	R228	0790024R	RES.CHIP 1/16W 100 OHM
R102	0790037R	RES.CHIP 1/16W 1.0K OHM	R229	0790024R	RES.CHIP 1/16W 100 OHM
R103	0790051R	RES.CHIP 1/16W 10K OHM	R230	0790024R	RES.CHIP 1/16W 100 OHM
R104	0790051R	RES.CHIP 1/16W 10K OHM	R231	0790024R	RES.CHIP 1/16W 100 OHM
R105	0790055R	RES.CHIP 1/16W 22K OHM	R232	0790051R	RES.CHIP 1/16W 10K OHM
R106	0790055R	RES.CHIP 1/16W 22K OHM	R233	0790059R	RES.CHIP 1/16W 47K OHM
R107	0790051R	RES.CHIP 1/16W 10K OHM	R234	0790037R	RES.CHIP 1/16W 1.0K OHM
R108	0790051R	RES.CHIP 1/16W 10K OHM	R235	0790051R	RES.CHIP 1/16W 10K OHM
R109	0790037R	RES.CHIP 1/16W 1.0K OHM	R236	0790059R	RES.CHIP 1/16W 47K OHM
R110	0790037R	RES.CHIP 1/16W 1.0K OHM	R237	0790037R	RES.CHIP 1/16W 1.0K OHM
R111	0790037R	RES.CHIP 1/16W 1.0K OHM	R238	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R112	0790037R	RES.CHIP 1/16W 1.0K OHM	R239	0790024R	RES.CHIP 1/16W 100 OHM
R113	0790037R	RES.CHIP 1/16W 1.0K OHM	R240	0790024R	RES.CHIP 1/16W 100 OHM
R114	0790059R	RES.CHIP 1/16W 47K OHM	R241	0790037R	RES.CHIP 1/16W 1.0K OHM
R115	0790024R	RES.CHIP 1/16W 100 OHM	R242	0790024R	RES.CHIP 1/16W 100 OHM
R116	0790024R	RES.CHIP 1/16W 100 OHM	R244	0790024R	RES.CHIP 1/16W 100 OHM
R117	0790059R	RES.CHIP 1/16W 47K OHM	R245	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R119	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R246	0790038R	RES.CHIP 1/16W 1.2K OHM
R120	0790037R	RES.CHIP 1/16W 1.0K OHM	R247	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R122	0790028R	RES.CHIP 1/16W 220 OHM	R249	0790024R	RES.CHIP 1/16W 100 OHM
R123	0790028R	RES.CHIP 1/16W 220 OHM	R250	0790024R	RES.CHIP 1/16W 100 OHM
R124	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R251	0790024R	RES.CHIP 1/16W 100 OHM
R125	0790037R	RES.CHIP 1/16W 1.0K OHM	R252	0790024R	RES.CHIP 1/16W 100 OHM
R126	0790037R	RES.CHIP 1/16W 1.0K OHM	R254	0790024R	RES.CHIP 1/16W 100 OHM
R127	0790037R	RES.CHIP 1/16W 1.0K OHM	R255	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R256	0790024R	RES.CHIP 1/16W 100 OHM	R2C3	0790037R	RES.CHIP 1/16W 1.0K OHM
R257	0790024R	RES.CHIP 1/16W 100 OHM	R2C5	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R258	0790024R	RES.CHIP 1/16W 100 OHM	R2D2	0790024R	RES.CHIP 1/16W 100 OHM
R259	0790024R	RES.CHIP 1/16W 100 OHM	R2D3	0790024R	RES.CHIP 1/16W 100 OHM
R260	0790024R	RES.CHIP 1/16W 100 OHM	R2D4	0790024R	RES.CHIP 1/16W 100 OHM
R261	0790061R	RES.CHIP 1/16W 56K OHM	R2D5	0790024R	RES.CHIP 1/16W 100 OHM
R262	0790046R	RES.CHIP 1/16W 4.7K OHM	R2D6	0790024R	RES.CHIP 1/16W 100 OHM
R263	0790059R	RES.CHIP 1/16W 47K OHM	R2D7	0790024R	RES.CHIP 1/16W 100 OHM
R265	0790063R	RES.CHIP 1/16W 82K OHM	R2D8	0790024R	RES.CHIP 1/16W 100 OHM
R266	0790051R	RES.CHIP 1/16W 10K OHM	R2D9	0790024R	RES.CHIP 1/16W 100 OHM
R267	0790047R	RES.CHIP 1/16W 5.6K OHM	R2E1	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R268	0790024R	RES.CHIP 1/16W 100 OHM	R2E2	0790024R	RES.CHIP 1/16W 100 OHM
R269	0790024R	RES.CHIP 1/16W 100 OHM	R2E3	0790024R	RES.CHIP 1/16W 100 OHM
R270	0790024R	RES.CHIP 1/16W 100 OHM	R2E4	0790037R	RES.CHIP 1/16W 1.0K OHM
R271	0790024R	RES.CHIP 1/16W 100 OHM	R2E5	0790024R	RES.CHIP 1/16W 100 OHM
R273	0790024R	RES.CHIP 1/16W 100 OHM	R2E6	0790024R	RES.CHIP 1/16W 100 OHM
R274	0790059R	RES.CHIP 1/16W 47K OHM	R2E7	0790024R	RES.CHIP 1/16W 100 OHM
R275	0790059R	RES.CHIP 1/16W 47K OHM	R2E8	0790024R	RES.CHIP 1/16W 100 OHM
R276	0790044R	RES.CHIP 1/16W 3.3K OHM	R2E9	0790024R	RES.CHIP 1/16W 100 OHM
R277	0790047R	RES.CHIP 1/16W 5.6K OHM	R2G8	0790024R	RES.CHIP 1/16W 100 OHM
R278	0790059R	RES.CHIP 1/16W 47K OHM	R2G9	0790024R	RES.CHIP 1/16W 100 OHM
R279	0790051R	RES.CHIP 1/16W 10K OHM	R2H1	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R281	0790051R	RES.CHIP 1/16W 10K OHM	R2H2	0790024R	RES.CHIP 1/16W 100 OHM
R282	0790057R	RES.CHIP 1/16W 33K OHM	R2H3	0790024R	RES.CHIP 1/16W 100 OHM
R283	0790037R	RES.CHIP 1/16W 1.0K OHM	R2H4	0790024R	RES.CHIP 1/16W 100 OHM
R284	0790044R	RES.CHIP 1/16W 3.3K OHM	R2H5	0790024R	RES.CHIP 1/16W 100 OHM
R285	0790024R	RES.CHIP 1/16W 100 OHM	R2H6	0790024R	RES.CHIP 1/16W 100 OHM
R286	0790059R	RES.CHIP 1/16W 47K OHM	R2H7	0790024R	RES.CHIP 1/16W 100 OHM
R287	0790059R	RES.CHIP 1/16W 47K OHM	R2H8	0790024R	RES.CHIP 1/16W 100 OHM
R288	0790058R	RES.CHIP 1/16W 39K OHM	R2H9	0790024R	RES.CHIP 1/16W 100 OHM
R289	0790046R	RES.CHIP 1/16W 4.7K OHM	R2J1	0790024R	RES.CHIP 1/16W 100 OHM
R290	0790024R	RES.CHIP 1/16W 100 OHM	R2J2	0790024R	RES.CHIP 1/16W 100 OHM
R291	0790044R	RES.CHIP 1/16W 3.3K OHM	R2J3	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R292	0790047R	RES.CHIP 1/16W 5.6K OHM	R2J4	0790024R	RES.CHIP 1/16W 100 OHM
R293	0790059R	RES.CHIP 1/16W 47K OHM	R2J5	0790037R	RES.CHIP 1/16W 1.0K OHM
R294	0790051R	RES.CHIP 1/16W 10K OHM	R2J6	0790042R	RES.CHIP 1/16W 2.2K OHM
R296	0790057R	RES.CHIP 1/16W 33K OHM	R2J8	0790028R	RES.CHIP 1/16W 220 OHM
R297	0790051R	RES.CHIP 1/16W 10K OHM	R2K1	0790024R	RES.CHIP 1/16W 100 OHM
R298	0790037R	RES.CHIP 1/16W 1.0K OHM	R2K2	0790024R	RES.CHIP 1/16W 100 OHM
R299	0790044R	RES.CHIP 1/16W 3.3K OHM	R2K3	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R2A1	0790024R	RES.CHIP 1/16W 100 OHM	R2K4	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R2A2	0790059R	RES.CHIP 1/16W 47K OHM	R2K5	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R2A3	0790059R	RES.CHIP 1/16W 47K OHM	R2K6	0790024R	RES.CHIP 1/16W 100 OHM
R2A4	0790058R	RES.CHIP 1/16W 39K OHM	R2K7	0790024R	RES.CHIP 1/16W 100 OHM
R2A5	0790046R	RES.CHIP 1/16W 4.7K OHM	R2K9	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R2A6	0790024R	RES.CHIP 1/16W 100 OHM	R2L1	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R2A7	0790046R	RES.CHIP 1/16W 4.7K OHM	R2L2	0790042R	RES.CHIP 1/16W 2.2K OHM
R2A8	0790047R	RES.CHIP 1/16W 5.6K OHM	R2L3	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R2A9	0790052R	RES.CHIP 1/16W 12K OHM	R2L5	0790059R	RES.CHIP 1/16W 47K OHM
R2B1	0790046R	RES.CHIP 1/16W 4.7K OHM	R2L6	0790051R	RES.CHIP 1/16W 10K OHM
R2B3	AQ00189R	RES.CHIP 1/16W 680 OHM TAPE	R2L7	0790037R	RES.CHIP 1/16W 1.0K OHM
R2B5	AQ00201R	RES.CHIP 1/16W 1.8K OHM TAPE	R2L8	0790036R	RES.CHIP 1/16W 820 OHM
R2B6	0790042R	RES.CHIP 1/16W 2.2K OHM	R2L9	0790059R	RES.CHIP 1/16W 47K OHM
R2B7	0790054R	RES.CHIP 1/16W 18K OHM	R2M1	0790051R	RES.CHIP 1/16W 10K OHM
R2C1	0790051R	RES.CHIP 1/16W 10K OHM	R2M2	0790037R	RES.CHIP 1/16W 1.0K OHM
R2C2	0790037R	RES.CHIP 1/16W 1.0K OHM	R2M3	0790036R	RES.CHIP 1/16W 820 OHM

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R2N5	0790042R	RES.CHIP 1/16W 2.2K OHM	R325	0790059R	RES.CHIP 1/16W 47K OHM
R2N6	0790068R	RES.CHIP 1/16W 220K OHM	R326	0790024R	RES.CHIP 1/16W 100 OHM
R2N7	0790042R	RES.CHIP 1/16W 2.2K OHM	R327	0790031R	RES.CHIP 1/16W 330 OHM
R2N8	0790068R	RES.CHIP 1/16W 220K OHM	R328	0790031R	RES.CHIP 1/16W 330 OHM
R2N9	0790042R	RES.CHIP 1/16W 2.2K OHM	R329	0790015R	RES.CHIP 1/16W 22 OHM
R2P1	0790068R	RES.CHIP 1/16W 220K OHM	R330	0790015R	RES.CHIP 1/16W 22 OHM
R2P2	0790042R	RES.CHIP 1/16W 2.2K OHM	R331	0790021R	RES.CHIP 1/16W 56 OHM
R2P3	0790068R	RES.CHIP 1/16W 220K OHM	R332	0790021R	RES.CHIP 1/16W 56 OHM
R2P4	0790042R	RES.CHIP 1/16W 2.2K OHM	R401	0790024R	RES.CHIP 1/16W 100 OHM
R2P5	0790042R	RES.CHIP 1/16W 2.2K OHM	R401A	0790024R	RES.CHIP 1/16W 100 OHM
R2P6	0790042R	RES.CHIP 1/16W 2.2K OHM	R402	0790062R	RES.CHIP 1/16W 68K OHM
R2P7	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R402A	0790062R	RES.CHIP 1/16W 68K OHM
R2P8	0790024R	RES.CHIP 1/16W 100 OHM	R403	0790064R	RES.CHIP 1/16W 100K OHM
R2P9	0790024R	RES.CHIP 1/16W 100 OHM	R403A	0790064R	RES.CHIP 1/16W 100K OHM
R2R1	0790024R	RES.CHIP 1/16W 100 OHM	R404	0790044R	RES.CHIP 1/16W 3.3K OHM
R2R3	0790059R	RES.CHIP 1/16W 47K OHM	R404A	0790044R	RES.CHIP 1/16W 3.3K OHM
R2R4	0790024R	RES.CHIP 1/16W 100 OHM	R405	0790069R	RES.CHIP 1/16W 270K OHM
R2R7	0790046R	RES.CHIP 1/16W 4.7K OHM	R405A	0790069R	RES.CHIP 1/16W 270K OHM
R2S1	0790059R	RES.CHIP 1/16W 47K OHM	R406	0790024R	RES.CHIP 1/16W 100 OHM
R2S2	0790028R	RES.CHIP 1/16W 220 OHM	R406A	0790024R	RES.CHIP 1/16W 100 OHM
R2S3	0790037R	RES.CHIP 1/16W 1.0K OHM	R407	0790062R	RES.CHIP 1/16W 68K OHM
R2S4	0790056R	RES.CHIP 1/16W 27K OHM	R407A	0790062R	RES.CHIP 1/16W 68K OHM
R2S5	0790055R	RES.CHIP 1/16W 22K OHM	R408	0790064R	RES.CHIP 1/16W 100K OHM
R2S6	0790051R	RES.CHIP 1/16W 10K OHM	R408A	0790064R	RES.CHIP 1/16W 100K OHM
R2S7	0790046R	RES.CHIP 1/16W 4.7K OHM	R409	0790044R	RES.CHIP 1/16W 3.3K OHM
R2S8	0790024R	RES.CHIP 1/16W 100 OHM	R409A	0790044R	RES.CHIP 1/16W 3.3K OHM
R2S9	0790051R	RES.CHIP 1/16W 10K OHM	R410	0790069R	RES.CHIP 1/16W 270K OHM
R2T1	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R410A	0790069R	RES.CHIP 1/16W 270K OHM
R2T3	0790028R	RES.CHIP 1/16W 220 OHM	R411	0790024R	RES.CHIP 1/16W 100 OHM
R2T4	0790064R	RES.CHIP 1/16W 100K OHM	R411A	0790024R	RES.CHIP 1/16W 100 OHM
R2T5	0790051R	RES.CHIP 1/16W 10K OHM	R412	0790062R	RES.CHIP 1/16W 68K OHM
R2T6	0790046R	RES.CHIP 1/16W 4.7K OHM	R412A	0790062R	RES.CHIP 1/16W 68K OHM
R2T7	0790042R	RES.CHIP 1/16W 2.2K OHM	R413	0790064R	RES.CHIP 1/16W 100K OHM
R2T8	0790042R	RES.CHIP 1/16W 2.2K OHM	R413A	0790064R	RES.CHIP 1/16W 100K OHM
R301	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R414	0790044R	RES.CHIP 1/16W 3.3K OHM
R302	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R414A	0790044R	RES.CHIP 1/16W 3.3K OHM
R303	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R415	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R304	0790024R	RES.CHIP 1/16W 100 OHM	R416	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R305	0790024R	RES.CHIP 1/16W 100 OHM	R417	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R306	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R419	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R307	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R420	0790059R	RES.CHIP 1/16W 47K OHM
R308	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R421	0790059R	RES.CHIP 1/16W 47K OHM
R309	0790024R	RES.CHIP 1/16W 100 OHM	R422	0790055R	RES.CHIP 1/16W 22K OHM
R310	0790024R	RES.CHIP 1/16W 100 OHM	R423	0790059R	RES.CHIP 1/16W 47K OHM
R311	0790042R	RES.CHIP 1/16W 2.2K OHM	R424	0790059R	RES.CHIP 1/16W 47K OHM
R312	0790059R	RES.CHIP 1/16W 47K OHM	R425	0790055R	RES.CHIP 1/16W 22K OHM
R313	0790059R	RES.CHIP 1/16W 47K OHM	R426	0790024R	RES.CHIP 1/16W 100 OHM
R314	0790059R	RES.CHIP 1/16W 47K OHM	R426A	0790024R	RES.CHIP 1/16W 100 OHM
R315	0790055R	RES.CHIP 1/16W 22K OHM	R427	0790024R	RES.CHIP 1/16W 100 OHM
R317	0790059R	RES.CHIP 1/16W 47K OHM	R427A	0790024R	RES.CHIP 1/16W 100 OHM
R318	0790059R	RES.CHIP 1/16W 47K OHM	R428	0790024R	RES.CHIP 1/16W 100 OHM
R320	0790012R	RES.CHIP 1/16W 12 OHM	R428A	0790024R	RES.CHIP 1/16W 100 OHM
R321	0790012R	RES.CHIP 1/16W 12 OHM	R429	0790024R	RES.CHIP 1/16W 100 OHM
R322	0790012R	RES.CHIP 1/16W 12 OHM	R429A	0790024R	RES.CHIP 1/16W 100 OHM
R323	0790012R	RES.CHIP 1/16W 12 OHM	R430	0790024R	RES.CHIP 1/16W 100 OHM
R324	0790064R	RES.CHIP 1/16W 100K OHM	R430A	0790024R	RES.CHIP 1/16W 100 OHM

Replacement Parts List

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R431	0790036R	RES.CHIP 1/16W 820 OHM	R469	0790051R	RES.CHIP 1/16W 10K OHM
R431A	0790036R	RES.CHIP 1/16W 820 OHM	R470	0790059R	RES.CHIP 1/16W 47K OHM
R432	0790037R	RES.CHIP 1/16W 1.0K OHM	R471	0790059R	RES.CHIP 1/16W 47K OHM
R432A	0790037R	RES.CHIP 1/16W 1.0K OHM	R472	0790042R	RES.CHIP 1/16W 2.2K OHM
R433	0790064R	RES.CHIP 1/16W 100K OHM	R901	0790037R	RES.CHIP 1/16W 1.0K OHM
R433A	0790064R	RES.CHIP 1/16W 100K OHM	R902	0790037R	RES.CHIP 1/16W 1.0K OHM
R434	0790028R	RES.CHIP 1/16W 220 OHM	R903	0790037R	RES.CHIP 1/16W 1.0K OHM
R434A	0790028R	RES.CHIP 1/16W 220 OHM	R905	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R435	0790063R	RES.CHIP 1/16W 82K OHM	R907	0790037R	RES.CHIP 1/16W 1.0K OHM
R435A	0790063R	RES.CHIP 1/16W 82K OHM	R911	0790059R	RES.CHIP 1/16W 47K OHM
R436	0790037R	RES.CHIP 1/16W 1.0K OHM	R912	0790059R	RES.CHIP 1/16W 47K OHM
R436A	0790037R	RES.CHIP 1/16W 1.0K OHM	R913	0790059R	RES.CHIP 1/16W 47K OHM
R437	0790024R	RES.CHIP 1/16W 100 OHM	R914	0790059R	RES.CHIP 1/16W 47K OHM
R437A	0790024R	RES.CHIP 1/16W 100 OHM	R915	0790059R	RES.CHIP 1/16W 47K OHM
R438	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R916	0790059R	RES.CHIP 1/16W 47K OHM
R438A	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R917	0790055R	RES.CHIP 1/16W 22K OHM
R439	0790024R	RES.CHIP 1/16W 100 OHM	R925	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R439A	0790024R	RES.CHIP 1/16W 100 OHM	R929	0790059R	RES.CHIP 1/16W 47K OHM
R440	0790037R	RES.CHIP 1/16W 1.0K OHM	R930	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R440A	0790037R	RES.CHIP 1/16W 1.0K OHM	R931	0790059R	RES.CHIP 1/16W 47K OHM
R441	0790028R	RES.CHIP 1/16W 220 OHM	R932	0790059R	RES.CHIP 1/16W 47K OHM
R441A	0790028R	RES.CHIP 1/16W 220 OHM	R933	0790024R	RES.CHIP 1/16W 100 OHM
R442	0790037R	RES.CHIP 1/16W 1.0K OHM	R935	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R442A	0790037R	RES.CHIP 1/16W 1.0K OHM	R940	0790024R	RES.CHIP 1/16W 100 OHM
R443	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R942	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R443A	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R943	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R444	0790046R	RES.CHIP 1/16W 4.7K OHM	R946	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R445	0790043R	RES.CHIP 1/16W 2.7K OHM	R948	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R446	0790047R	RES.CHIP 1/16W 5.6K OHM	RV01	0790024R	RES.CHIP 1/16W 100 OHM
R447	0790044R	RES.CHIP 1/16W 3.3K OHM	RV02	0790043R	RES.CHIP 1/16W 2.7K OHM
R448	0790048R	RES.CHIP 1/16W 6.8K OHM	RV03	0790037R	RES.CHIP 1/16W 1.0K OHM
R449	0790046R	RES.CHIP 1/16W 4.7K OHM	RV04	0790037R	RES.CHIP 1/16W 1.0K OHM
R450	AT03669M	RES.MTL GRAZD FLM 1/2W 2.2M	RV05	0790059R	RES.CHIP 1/16W 47K OHM
R451	0790024R	RES.CHIP 1/16W 100 OHM	RV06	0790055R	RES.CHIP 1/16W 22K OHM
R451A	0790024R	RES.CHIP 1/16W 100 OHM	RV07	0790024R	RES.CHIP 1/16W 100 OHM
R452	0790034R	RES.CHIP 1/16W 560 OHM	RV08	0790035R	RES.CHIP 1/16W 680 OHM
R452A	0790034R	RES.CHIP 1/16W 560 OHM	RV09	0790034R	RES.CHIP 1/16W 560 OHM
R453	0790034R	RES.CHIP 1/16W 560 OHM	RV10	AQ00193R	RES.CHIP 1/16W 910 OHM TAPE
R453A	0790034R	RES.CHIP 1/16W 560 OHM	RV12	0790024R	RES.CHIP 1/16W 100 OHM
R454	0790039R	RES.CHIP 1/16W 1.5K OHM	RV13	0790041R	RES.CHIP 1/16W 1.8K OHM
R454A	0790039R	RES.CHIP 1/16W 1.5K OHM	RV14	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R455	0790066R	RES.CHIP 1/16W 150K OHM	RV15	0790024R	RES.CHIP 1/16W 100 OHM
R455A	0790066R	RES.CHIP 1/16W 150K OHM	RV16	0790044R	RES.CHIP 1/16W 3.3K OHM
R456	0790037R	RES.CHIP 1/16W 1.0K OHM	RV17	0790037R	RES.CHIP 1/16W 1.0K OHM
R456A	0790037R	RES.CHIP 1/16W 1.0K OHM	RV18	0790037R	RES.CHIP 1/16W 1.0K OHM
R457	0188114M	RES.-CARBON FLM 1/2W 56-J	RV19	0790059R	RES.CHIP 1/16W 47K OHM
R458	0790047R	RES.CHIP 1/16W 5.6K OHM	RV20	0790055R	RES.CHIP 1/16W 22K OHM
R459	0790047R	RES.CHIP 1/16W 5.6K OHM	RV21	0790024R	RES.CHIP 1/16W 100 OHM
R460	0790024R	RES.CHIP 1/16W 100 OHM	RV22	0790035R	RES.CHIP 1/16W 680 OHM
R461	0790047R	RES.CHIP 1/16W 5.6K OHM	RV23	0790034R	RES.CHIP 1/16W 560 OHM
R462	0790059R	RES.CHIP 1/16W 47K OHM	RV24	0790038R	RES.CHIP 1/16W 1.2K OHM
R463	0790059R	RES.CHIP 1/16W 47K OHM	RV26	0790024R	RES.CHIP 1/16W 100 OHM
R464	0790037R	RES.CHIP 1/16W 1.0K OHM	RV27	0790041R	RES.CHIP 1/16W 1.8K OHM
R465	0790061R	RES.CHIP 1/16W 56K OHM	RV28	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R466	0790061R	RES.CHIP 1/16W 56K OHM	RV30	0790036R	RES.CHIP 1/16W 820 OHM
R468	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	RV31	0790056R	RES.CHIP 1/16W 27K OHM

Replacement Parts List

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RV32	0790064R	RES.CHIP 1/16W 100K OHM	RW57	0790024R	RES.CHIP 1/16W 100 OHM
RV33	0790024R	RES.CHIP 1/16W 100 OHM	RW58	0790034R	RES.CHIP 1/16W 560 OHM
RV35	0790033R	RES.CHIP 1/16W 470 OHM	RW59	0790037R	RES.CHIP 1/16W 1.0K OHM
RV36	0196064R	RES.-1608CHIP 1/16W 750-J TAPE	RW60	0790027R	RES.CHIP 1/16W 180 OHM
RV37	0196064R	RES.-1608CHIP 1/16W 750-J TAPE	RW61	0790036R	RES.CHIP 1/16W 820 OHM
RV38	0790024R	RES.CHIP 1/16W 100 OHM	RW62	0790059R	RES.CHIP 1/16W 47K OHM
RV39	0790043R	RES.CHIP 1/16W 2.7K OHM	RW63	0196102R	RES.-1608CHIP 1/16W 24K-J TAPE
RW01	0790055R	RES.CHIP 1/16W 22K OHM	RW64	0790041R	RES.CHIP 1/16W 1.8K OHM
RW02	0790056R	RES.CHIP 1/16W 27K OHM	RW65	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
RW03	0790024R	RES.CHIP 1/16W 100 OHM	RW67	0790024R	RES.CHIP 1/16W 100 OHM
RW04	0790042R	RES.CHIP 1/16W 2.2K OHM	RX01	AQ00164R	RES.CHIP 1/16W 75 OHM TAPE
RW05	0790037R	RES.CHIP 1/16W 1.0K OHM	RX02	AQ00164R	RES.CHIP 1/16W 75 OHM TAPE
RW06	0790027R	RES.CHIP 1/16W 180 OHM	RX03	AQ00164R	RES.CHIP 1/16W 75 OHM TAPE
RW07	0790036R	RES.CHIP 1/16W 820 OHM	RX04	0790069R	RES.CHIP 1/16W 270K OHM
RW08	0790044R	RES.CHIP 1/16W 3.3K OHM	RX05	0790069R	RES.CHIP 1/16W 270K OHM
RW09	0790061R	RES.CHIP 1/16W 56K OHM	RX06	0790047R	RES.CHIP 1/16W 5.6K OHM
RW10	0790055R	RES.CHIP 1/16W 22K OHM	RX07	0790047R	RES.CHIP 1/16W 5.6K OHM
RW11	0790048R	RES.CHIP 1/16W 6.8K OHM	RX08	AQ00164R	RES.CHIP 1/16W 75 OHM TAPE
RW12	0790041R	RES.CHIP 1/16W 1.8K OHM	RX09	AQ00164R	RES.CHIP 1/16W 75 OHM TAPE
RW13	0790024R	RES.CHIP 1/16W 100 OHM	RX10	AQ00164R	RES.CHIP 1/16W 75 OHM TAPE
RW14	0790039R	RES.CHIP 1/16W 1.5K OHM	RX11	0790069R	RES.CHIP 1/16W 270K OHM
RW15	0790028R	RES.CHIP 1/16W 220 OHM	RX12	0790069R	RES.CHIP 1/16W 270K OHM
RW16	0790059R	RES.CHIP 1/16W 47K OHM	RX13	0790047R	RES.CHIP 1/16W 5.6K OHM
RW17	0790068R	RES.CHIP 1/16W 220K OHM	RX14	0790047R	RES.CHIP 1/16W 5.6K OHM
RW18	0790037R	RES.CHIP 1/16W 1.0K OHM	RX15	0790037R	RES.CHIP 1/16W 1.0K OHM
RW19	0790042R	RES.CHIP 1/16W 2.2K OHM	RX16	AQ00164R	RES.CHIP 1/16W 75 OHM TAPE
RW20	0790033R	RES.CHIP 1/16W 470 OHM	RX17	0790069R	RES.CHIP 1/16W 270K OHM
RW21	0790046R	RES.CHIP 1/16W 4.7K OHM	RX18	0790069R	RES.CHIP 1/16W 270K OHM
RW22	0790011R	RES.CHIP 1/16W 10 OHM	RX19	AQ00164R	RES.CHIP 1/16W 75 OHM TAPE
RW23	0790042R	RES.CHIP 1/16W 2.2K OHM	RX20	AQ00164R	RES.CHIP 1/16W 75 OHM TAPE
RW24	AQ00194R	RES.CHIP 1/16W 1.0K OHM TAPE	RX21	0790024R	RES.CHIP 1/16W 100 OHM
RW25	AQ00194R	RES.CHIP 1/16W 1.0K OHM TAPE	RX22	0790047R	RES.CHIP 1/16W 5.6K OHM
RW26	0790058R	RES.CHIP 1/16W 39K OHM	RX23	0790047R	RES.CHIP 1/16W 5.6K OHM
RW27	0790051R	RES.CHIP 1/16W 10K OHM	RX24	0790024R	RES.CHIP 1/16W 100 OHM
RW28	0790024R	RES.CHIP 1/16W 100 OHM	RX25	0790024R	RES.CHIP 1/16W 100 OHM
RW29	AQ00187R	RES.CHIP 1/16W 560 OHM TAPE	RX26	0790037R	RES.CHIP 1/16W 1.0K OHM
RW30	0790037R	RES.CHIP 1/16W 1.0K OHM	RX27	AQ00164R	RES.CHIP 1/16W 75 OHM TAPE
RW31	AQ00194R	RES.CHIP 1/16W 1.0K OHM TAPE	RX28	0790069R	RES.CHIP 1/16W 270K OHM
RW33	0790024R	RES.CHIP 1/16W 100 OHM	RX29	0790069R	RES.CHIP 1/16W 270K OHM
RW34	0790037R	RES.CHIP 1/16W 1.0K OHM	RX30	AQ00164R	RES.CHIP 1/16W 75 OHM TAPE
RW35	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	RX31	AQ00164R	RES.CHIP 1/16W 75 OHM TAPE
RW36	0790011R	RES.CHIP 1/16W 10 OHM	RX32	0790024R	RES.CHIP 1/16W 100 OHM
RW37	0790042R	RES.CHIP 1/16W 2.2K OHM	RX33	0790047R	RES.CHIP 1/16W 5.6K OHM
RW38	0790037R	RES.CHIP 1/16W 1.0K OHM	RX34	0790047R	RES.CHIP 1/16W 5.6K OHM
RW39	0790037R	RES.CHIP 1/16W 1.0K OHM	RX35	0790024R	RES.CHIP 1/16W 100 OHM
RW40	0790058R	RES.CHIP 1/16W 39K OHM	RX36	0790024R	RES.CHIP 1/16W 100 OHM
RW41	0790051R	RES.CHIP 1/16W 10K OHM	RX37	0790037R	RES.CHIP 1/16W 1.0K OHM
RW42	0790024R	RES.CHIP 1/16W 100 OHM	RX38	0790064R	RES.CHIP 1/16W 100K OHM
RW43	0790034R	RES.CHIP 1/16W 560 OHM	RX39	0790064R	RES.CHIP 1/16W 100K OHM
RW44	0790037R	RES.CHIP 1/16W 1.0K OHM	RX40	0790064R	RES.CHIP 1/16W 100K OHM
RW45	0790044R	RES.CHIP 1/16W 3.3K OHM	RX41	0790064R	RES.CHIP 1/16W 100K OHM
RW47	0790024R	RES.CHIP 1/16W 100 OHM	RX42	0790064R	RES.CHIP 1/16W 100K OHM
RW48	0790024R	RES.CHIP 1/16W 100 OHM	RX43	0790028R	RES.CHIP 1/16W 220 OHM
RW50	0790064R	RES.CHIP 1/16W 100K OHM	RX44	0790028R	RES.CHIP 1/16W 220 OHM
RW55	0790064R	RES.CHIP 1/16W 100K OHM	RX45	0790037R	RES.CHIP 1/16W 1.0K OHM
RW56	0790065R	RES.CHIP 1/16W 120K OHM	RX46	0790037R	RES.CHIP 1/16W 1.0K OHM

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RX47	0790063R	RES.CHIP 1/16W 82K OHM	RY11	0790024R	RES.CHIP 1/16W 100 OHM
RX48	0790037R	RES.CHIP 1/16W 1.0K OHM	RY12	0790042R	RES.CHIP 1/16W 2.2K OHM
RX49	0790063R	RES.CHIP 1/16W 82K OHM	RY13	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
RX50	0790037R	RES.CHIP 1/16W 1.0K OHM	RY14	0790024R	RES.CHIP 1/16W 100 OHM
RX51	AQ00163R	RES.CHIP 1/16W 68 OHM TAPE	RY15	0790024R	RES.CHIP 1/16W 100 OHM
RX52	0790024R	RES.CHIP 1/16W 100 OHM	RY16	0790037R	RES.CHIP 1/16W 1.0K OHM
RX53	AQ00163R	RES.CHIP 1/16W 68 OHM TAPE	RY17	AQ00194R	RES.CHIP 1/16W 1.0K OHM TAPE
RX54	0790024R	RES.CHIP 1/16W 100 OHM	RY18	0790024R	RES.CHIP 1/16W 100 OHM
RX55	AQ00163R	RES.CHIP 1/16W 68 OHM TAPE	RY19	0790024R	RES.CHIP 1/16W 100 OHM
RX56	0790024R	RES.CHIP 1/16W 100 OHM	RY20	0790024R	RES.CHIP 1/16W 100 OHM
RX57	0790034R	RES.CHIP 1/16W 560 OHM	RY21	0790042R	RES.CHIP 1/16W 2.2K OHM
RX58	0790034R	RES.CHIP 1/16W 560 OHM	RY22	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
RX59	0790034R	RES.CHIP 1/16W 560 OHM	RY23	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
RX60	0790034R	RES.CHIP 1/16W 560 OHM	RY24	AQ00194R	RES.CHIP 1/16W 1.0K OHM TAPE
RX61	0790034R	RES.CHIP 1/16W 560 OHM	RY28	0790037R	RES.CHIP 1/16W 1.0K OHM
RX62	0790034R	RES.CHIP 1/16W 560 OHM	RY29	0790024R	RES.CHIP 1/16W 100 OHM
RX63	0790034R	RES.CHIP 1/16W 560 OHM	RY30	0790024R	RES.CHIP 1/16W 100 OHM
RX64	0790034R	RES.CHIP 1/16W 560 OHM	RY31	0790024R	RES.CHIP 1/16W 100 OHM
RX65	0790034R	RES.CHIP 1/16W 560 OHM	RY32	0790024R	RES.CHIP 1/16W 100 OHM
RX70	0790024R	RES.CHIP 1/16W 100 OHM	RY33	0790024R	RES.CHIP 1/16W 100 OHM
RX71	0790024R	RES.CHIP 1/16W 100 OHM	RY34	0790024R	RES.CHIP 1/16W 100 OHM
RX72	0790024R	RES.CHIP 1/16W 100 OHM	RY35	0790024R	RES.CHIP 1/16W 100 OHM
RX73	0790024R	RES.CHIP 1/16W 100 OHM	RY36	0790024R	RES.CHIP 1/16W 100 OHM
RX79	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	RY37	0790024R	RES.CHIP 1/16W 100 OHM
RX80	0790024R	RES.CHIP 1/16W 100 OHM	RY38	AQ00164R	RES.CHIP 1/16W 75 OHM TAPE
RX81	0790024R	RES.CHIP 1/16W 100 OHM	RY39	AQ00164R	RES.CHIP 1/16W 75 OHM TAPE
RX82	0790024R	RES.CHIP 1/16W 100 OHM	RY40	AQ00164R	RES.CHIP 1/16W 75 OHM TAPE
RX83	0790024R	RES.CHIP 1/16W 100 OHM	RY41	0790024R	RES.CHIP 1/16W 100 OHM
RX84	0790042R	RES.CHIP 1/16W 2.2K OHM	RY42	0790024R	RES.CHIP 1/16W 100 OHM
RX85	0790068R	RES.CHIP 1/16W 220K OHM	RY43	0790024R	RES.CHIP 1/16W 100 OHM
RX86	0790042R	RES.CHIP 1/16W 2.2K OHM	RY45	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
RX87	0790068R	RES.CHIP 1/16W 220K OHM	RY46	0790037R	RES.CHIP 1/16W 1.0K OHM
RX88	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	RY47	0790024R	RES.CHIP 1/16W 100 OHM
RX90	0790024R	RES.CHIP 1/16W 100 OHM	RY48	0790024R	RES.CHIP 1/16W 100 OHM
RX91	0790024R	RES.CHIP 1/16W 100 OHM	RY49	0790044R	RES.CHIP 1/16W 3.3K OHM
RX92	0790024R	RES.CHIP 1/16W 100 OHM	RY50	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
RX93	0790024R	RES.CHIP 1/16W 100 OHM	RY51	0790024R	RES.CHIP 1/16W 100 OHM
RX94	0790037R	RES.CHIP 1/16W 1.0K OHM	RY52	0790044R	RES.CHIP 1/16W 3.3K OHM
RX95	AQ00164R	RES.CHIP 1/16W 75 OHM TAPE	RY53	AQ00196R	RES.CHIP 1/16W 1.2K OHM TAPE
RX96	0790024R	RES.CHIP 1/16W 100 OHM	RY54	AQ00201R	RES.CHIP 1/16W 1.8K OHM TAPE
RX97	AQ00164R	RES.CHIP 1/16W 75 OHM TAPE	RY55	0790024R	RES.CHIP 1/16W 100 OHM
RX98	0790024R	RES.CHIP 1/16W 100 OHM	RY56	0790044R	RES.CHIP 1/16W 3.3K OHM
RXA3	AQ00193R	RES.CHIP 1/16W 910 OHM TAPE	RY57	AQ00196R	RES.CHIP 1/16W 1.2K OHM TAPE
RXA6	0790037R	RES.CHIP 1/16W 1.0K OHM	RY58	AQ00201R	RES.CHIP 1/16W 1.8K OHM TAPE
RXA7	0790047R	RES.CHIP 1/16W 5.6K OHM	RY59	0790024R	RES.CHIP 1/16W 100 OHM
RXA8	0790024R	RES.CHIP 1/16W 100 OHM	RY60	0790044R	RES.CHIP 1/16W 3.3K OHM
RXA9	AQ00193R	RES.CHIP 1/16W 910 OHM TAPE	RY61	AQ00196R	RES.CHIP 1/16W 1.2K OHM TAPE
RY01	0790047R	RES.CHIP 1/16W 5.6K OHM	RY62	AQ00201R	RES.CHIP 1/16W 1.8K OHM TAPE
RY02	0790047R	RES.CHIP 1/16W 5.6K OHM	RY63	0790024R	RES.CHIP 1/16W 100 OHM
RY04	0790024R	RES.CHIP 1/16W 100 OHM	RY64	0790044R	RES.CHIP 1/16W 3.3K OHM
RY05	AQ00164R	RES.CHIP 1/16W 75 OHM TAPE	RY65	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
RY06	0790024R	RES.CHIP 1/16W 100 OHM	RY66	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
RY07	0790024R	RES.CHIP 1/16W 100 OHM	RY68	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
RY08	0790024R	RES.CHIP 1/16W 100 OHM	RY69	0790044R	RES.CHIP 1/16W 3.3K OHM
RY09	0790024R	RES.CHIP 1/16W 100 OHM	RY70	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
RY10	0790024R	RES.CHIP 1/16W 100 OHM	RY71	0790024R	RES.CHIP 1/16W 100 OHM

Replacement Parts List

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RY72	0790044R	RES.CHIP 1/16W 3.3K OHM	RZ32	0790024R	RES.CHIP 1/16W 100 OHM
RY73	AQ00196R	RES.CHIP 1/16W 1.2K OHM TAPE	RZ33	0790051R	RES.CHIP 1/16W 10K OHM
RY74	AQ00201R	RES.CHIP 1/16W 1.8K OHM TAPE	RZ34	0790051R	RES.CHIP 1/16W 10K OHM
RY75	0790024R	RES.CHIP 1/16W 100 OHM	RZ35	0790024R	RES.CHIP 1/16W 100 OHM
RY76	0790044R	RES.CHIP 1/16W 3.3K OHM	RZ36	0790024R	RES.CHIP 1/16W 100 OHM
RY77	AQ00196R	RES.CHIP 1/16W 1.2K OHM TAPE	RZ37	0790024R	RES.CHIP 1/16W 100 OHM
RY78	AQ00201R	RES.CHIP 1/16W 1.8K OHM TAPE	RZ38	0790024R	RES.CHIP 1/16W 100 OHM
RY79	0790024R	RES.CHIP 1/16W 100 OHM	RZ39	0790024R	RES.CHIP 1/16W 100 OHM
RY80	0790044R	RES.CHIP 1/16W 3.3K OHM	RZ40	0790024R	RES.CHIP 1/16W 100 OHM
RY81	AQ00196R	RES.CHIP 1/16W 1.2K OHM TAPE	RZ41	0196087R	RES.-1608CHIP 1/16W 6.2K-J TAPE
RY82	AQ00201R	RES.CHIP 1/16W 1.8K OHM TAPE	RZ42	0196056R	RES.-1608CHIP 1/16W 360-J TAPE
RY83	0790024R	RES.CHIP 1/16W 100 OHM	RZ44	0790024R	RES.CHIP 1/16W 100 OHM
RY84	0790044R	RES.CHIP 1/16W 3.3K OHM	RZ45	0790024R	RES.CHIP 1/16W 100 OHM
RY85	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	RZ46	0790024R	RES.CHIP 1/16W 100 OHM
RY86	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	RZ47	0790024R	RES.CHIP 1/16W 100 OHM
RY87	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	RZ48	0790024R	RES.CHIP 1/16W 100 OHM
RY88	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	RZ49	0790024R	RES.CHIP 1/16W 100 OHM
RY89	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	RZ50	0790024R	RES.CHIP 1/16W 100 OHM
RY90	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	RZ51	0196104R	RES 1608 CHIP 1/16W 30KJ TAPE
RY94	0790069R	RES.CHIP 1/16W 270K OHM	RZ52	0790024R	RES.CHIP 1/16W 100 OHM
RY95	0790069R	RES.CHIP 1/16W 270K OHM	RZ53	0790024R	RES.CHIP 1/16W 100 OHM
RY98	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	RZ54	0790024R	RES.CHIP 1/16W 100 OHM
RY99	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	RZ55	0790024R	RES.CHIP 1/16W 100 OHM
RYA1	0790047R	RES.CHIP 1/16W 5.6K OHM	RZ56	0790032R	RES.CHIP 1/16W 390 OHM
RYA2	0790024R	RES.CHIP 1/16W 100 OHM	RZ57	0790032R	RES.CHIP 1/16W 390 OHM
RYA3	0790042R	RES.CHIP 1/16W 2.2K OHM	RZ58	0790034R	RES.CHIP 1/16W 560 OHM
RZ01	0790051R	RES.CHIP 1/16W 10K OHM	RZ59	0790053R	RES.CHIP 1/16W 15K OHM
RZ02	0790051R	RES.CHIP 1/16W 10K OHM	RZ60	0790024R	RES.CHIP 1/16W 100 OHM
RZ03	0790024R	RES.CHIP 1/16W 100 OHM	RZ61	0790052R	RES.CHIP 1/16W 12K OHM
RZ04	0790024R	RES.CHIP 1/16W 100 OHM	RZ62	0790037R	RES.CHIP 1/16W 1.0K OHM
RZ05	0790024R	RES.CHIP 1/16W 100 OHM	RZ63	0790024R	RES.CHIP 1/16W 100 OHM
RZ06	0790024R	RES.CHIP 1/16W 100 OHM	RZ64	0790049R	RES.CHIP 1/16W 8.2K OHM
RZ07	0790024R	RES.CHIP 1/16W 100 OHM	RZ65	0790054R	RES.CHIP 1/16W 18K OHM
RZ08	0790024R	RES.CHIP 1/16W 100 OHM	RZ66	0790051R	RES.CHIP 1/16W 10K OHM
RZ09	0196087R	RES.-1608CHIP 1/16W 6.2K-J TAPE	RZ67	0790051R	RES.CHIP 1/16W 10K OHM
RZ10	0196056R	RES.-1608CHIP 1/16W 360-J TAPE	RZ68	0790024R	RES.CHIP 1/16W 100 OHM
RZ11	0790024R	RES.CHIP 1/16W 100 OHM	RZ69	0790024R	RES.CHIP 1/16W 100 OHM
RZ13	0790024R	RES.CHIP 1/16W 100 OHM	RZ70	0790024R	RES.CHIP 1/16W 100 OHM
RZ14	0790024R	RES.CHIP 1/16W 100 OHM	RZ71	0790041R	RES.CHIP 1/16W 1.8K OHM
RZ15	0790024R	RES.CHIP 1/16W 100 OHM	RZ72	0790041R	RES.CHIP 1/16W 1.8K OHM
RZ16	0790024R	RES.CHIP 1/16W 100 OHM	RZ73	0790041R	RES.CHIP 1/16W 1.8K OHM
RZ17	0790024R	RES.CHIP 1/16W 100 OHM	RZ74	0790024R	RES.CHIP 1/16W 100 OHM
RZ18	0790024R	RES.CHIP 1/16W 100 OHM	RZ75	0790024R	RES.CHIP 1/16W 100 OHM
RZ19	0790037R	RES.CHIP 1/16W 1.0K OHM	RZ76	0790024R	RES.CHIP 1/16W 100 OHM
RZ20	0790037R	RES.CHIP 1/16W 1.0K OHM	RZ77	0790024R	RES.CHIP 1/16W 100 OHM
RZ21	0790037R	RES.CHIP 1/16W 1.0K OHM	RZ78	0790042R	RES.CHIP 1/16W 2.2K OHM
RZ22	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	RZ79	0790024R	RES.CHIP 1/16W 100 OHM
RZ23	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	RZ80	0790042R	RES.CHIP 1/16W 2.2K OHM
RZ24	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	RZ81	0790024R	RES.CHIP 1/16W 100 OHM
RZ25	0790024R	RES.CHIP 1/16W 100 OHM	RZ82	0790024R	RES.CHIP 1/16W 100 OHM
RZ26	0790024R	RES.CHIP 1/16W 100 OHM	RZ83	0790032R	RES.CHIP 1/16W 390 OHM
RZ27	0790024R	RES.CHIP 1/16W 100 OHM	RZ84	0790033R	RES.CHIP 1/16W 470 OHM
RZ28	0196104R	RES 1608 CHIP 1/16W 30KJ TAPE	RZ85	0790034R	RES.CHIP 1/16W 560 OHM
RZ29	0790024R	RES.CHIP 1/16W 100 OHM	RZ86	0790053R	RES.CHIP 1/16W 15K OHM
RZ30	0790024R	RES.CHIP 1/16W 100 OHM	RZ87	0790024R	RES.CHIP 1/16W 100 OHM
RZ31	0790024R	RES.CHIP 1/16W 100 OHM	RZ88	0790052R	RES.CHIP 1/16W 12K OHM

Replacement Parts List

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RZ89	0790037R	RES.CHIP 1/16W 1.0K OHM			
RZ90	0790024R	RES.CHIP 1/16W 100 OHM			**AVC20 Final assembly (P#: UQ32141)**
RZ91	0790049R	RES.CHIP 1/16W 8.2K OHM			
RZ92	0790054R	RES.CHIP 1/16W 18K OHM	#10	PH09468	F.PANEL ASS'Y HDT20B
RZ93	0790051R	RES.CHIP 1/16W 10K OHM	#33	QJ00851	INSULATOR AVC1
RZ94	0790051R	RES.CHIP 1/16W 10K OHM	#34	4620353	LEG CUSHION AVC
RZ95	0790034R	RES.CHIP 1/16W 560 OHM	#39	MJ00781	SCREW 3*8 BRAZIER
RZ96	0790034R	RES.CHIP 1/16W 560 OHM	#50	QA02061	TOP CASE AVC-1
RZ97	0790034R	RES.CHIP 1/16W 560 OHM	#60	PM23862	TERMINAL MTL HDT20B
RZA2	0790021R	RES.CHIP 1/16W 56 OHM	A21	CS00611	HCP091 ASS'Y (FC/MSC module)
RZA3	0790021R	RES.CHIP 1/16W 56 OHM	EANT	HP00771	ANT SW
RZA4	0790021R	RES.CHIP 1/16W 56 OHM	EFEM	2979174	PLUG WITH COAXIAL CABLE
RZA5	0790033R	RES.CHIP 1/16W 470 OHM	EFES	2979174	PLUG WITH COAXIAL CABLE
RZA6	0790033R	RES.CHIP 1/16W 470 OHM	EP50FP	EK01433	WIRE (PROCESSED)
RZB5	0790033R	RES.CHIP 1/16W 470 OHM	EPS1	2974008S	CONNECTOR 13C-C2R5-471
RZB6	0790033R	RES.CHIP 1/16W 470 OHM	EPS2	EF21491	CONNECTOR
		FILTERS AND CRYSTALS			**AVC Owner's Accessories**
X001	BP01311R	CSTLS16M0X			
X201	BP01313R	CSTLS8M00G53	#10	SG32902	PDP ACCESSORIES BOX
XV01	BE00351	6.0MHZ LOW PASS LC FILTER	E001	FQ00021	DRY BATTERY(R6P-AA)
XV02	BE00341	3.58MHZ BAND PASS LC FILTER	E100	EW07193	DVI Cable (3M ~ 9')
XW01	BE00351	6.0MHZ LOW PASS LC FILTER	E100A	GX00642	FERRITE CLAMP SFT-37SS
XW02	BE00341	3.58MHZ BAND PASS LC FILTER	E201	EY01641	IR Blaster Cable
XZ01	2168771	X'TAL(TYPE CSB503F30)	E202	EY01641	IR Blaster Cable
XZ02	2791501	CRYSTAL HC-49/U	E901	EV00832	AC Cord Assy
XZ03	2168771	X'TAL(TYPE CSB503F30)	N001	QR52141	32HDT20 INSTRUCTION MANUAL
XZ04	2791501	CRYSTAL HC-49/U	N202	H463071	PLASMA TV WARRANTY CARD USA
H901	BE00222R	LC FILTER ACH3218-103-T	N204	H463005	INSERT SHEET PDP
H902	BE00222R	LC FILTER ACH3218-103-T	U001	HL01823	Remote Control CLU-5723TSI
H903	BE00222R	LC FILTER ACH3218-103-T	N211	H463051	EASY GRAPHIC GUIDE PLASMA TV
			N220	H463101	PDP ON-LINE REGISTRATION
		MISCELLANEOUS			
EAN	2974052S	CONNECTOR 03C-B2R5-800			**AVC20 exploded view parts list**
EPW01P	2909253	CONNECTOR 09C-B2R0-101			
EPW02P	2909375	CONNECTOR 13C-B2R0-141	Symb	part #	Description
J201	ES00511	JACK HSJ1002-01-1020	1	PH09468	Front panel assembly
J401	EU01281	TERMINAL BOARD PJP1689 6/6P	2	QJ00851	Insulator
JX01	EU01282	TERMINAL BOARD JPJ1689 5/6P	3	4620353	Leg cushion
JX02	EU01282	TERMINAL BOARD JPJ1689 5/6P	4	MJ00781	Screw 3x8 brazier
JX03	ES00351	JACK LAP5120-0101F US9P Y/C3P	5	QA02061	Top case
NI901	3445627	HEAT.SINK 4517	6	PM23862	Terminal MTL HDT20
NI901A	4520881	M3*8 SCREW WITH WASHER	7	**AC inlet ass'y**	
NI902	3445624	HEATSINK OSH-1035-SPL	⚠	EP00241	Jack (AC inlet)
NI902A	4520881	M3*8 SCREW WITH WASHER		9451138	UL FR-1 tube no. 3 (30 mm)
P50FP	EA00932R	0.5MM PITCH FPC CONNECTOR FH12-50S-0.5SV		EF21372	Connector (EP01)
PCHK3	2902264	PLUG PIN SUB MINI 5P		EF09603	Connector (EP02)
PCONT	2959059	PLUG PH PIN POST 10P		3763751	SK binder (N902, N905)
PFH2	2902261	PLUG PIN SUB MINI 2P	⚠ 8	EV00832	COD-UL/CSA Power cord
PFSH	2959059	PLUG PH PIN POST 10P	9	HP00771	Antena switch
PJIG	2902266	PLUG PIN SUB MINI 7P	10	JT23181	Control PWB assembly
PPS1	2902273	PLUGPIN SUB MINI 13P	11	JT23191	Power PWB assembly
PPS2	ED01531	PLUG 02BP3R9V-VH(PBT)	12	JP05501	AV PWB assembly
PRST	2902261	PLUG PIN SUB MINI 2P	13	CS00611	HCP091 (FC/MSC module)
PSY	2959054	PINPOST 5P PH			
PSY2	2959054	PINPOST 5P PH			
PV3	2959065	PIN POST(PH 15P)			

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
		32HDT20M Service parts list			
		(Check Exploded View, P. 116)			
1	QD21568	Bezel assembly			
1C	3332452	Knob spring			
1D	PC04961	Power button			
2	KS04941	Optical front filter			
3	DD00453	PDP Module (FPF32C106128UA-61)			
⚠ 4	HA01023	Power Unit			
5	GM01061	Speaker unit (EAB1691A2)			
6		**Signal/Audio Block**			
	JP04843	Signal/Audio PWB assembly			
	MF00983	Gasket 10-2-20			
	MF00984	Gasket 10-2-6			
7	QA02661	Back cover ass'y			
7A	QA02252	Cover PDP32H			
7B	QL21002	AC label 32HD			
7C	QL20394	Signal Plate HDT20			
7D	MF00981	Gasket 15-4-254			
7E	ZX02821	Copper Foil Tape 2245			
8A	JT22733	Power/Filter PWB assembly			
8B	JT22733	LED PWB assembly			
⚠ 9		**AC inlet assembly**			
	EP00261	Receptacle (PJD AC inlet GL-2100M)			
	MF00991	Gasket 65TSC 10-2-50			
10	QJ00923	Stand assembly			
11	NQ20041	Stand support			
⚠ 12	2634733	Power switch SDDFC3002A			
13	NJ05371	Switch Shaft			
		42HDT20M Service parts list			
		(Check Exploded View, P. 117)			
1	QD33488	Bezel assembly			
2	KS04431	Front Filter			
3	GM01095	Speaker unit			
4	QA02603	(Back) Cover assembly			
5	QJ01022	Stand assembly			
6	DD00511	FLTFPF42C128128UB-51(PDP module)			
⚠ 7	HA00994	Power unit			
8	JP05406	Signal/Audio PWB assembly			
9A	JT23006	Filter PWB assembly			
9B	JT23006	LED PWB assembly			
9C	JT23006	SP terminal-L PWB assembly			
9D	JT23006	SP terminal-R PWB assembly			
⚠ 10	2634733	Power Switch (SPW02-S01-SDDFC3002A)			
⚠ 11	EP00261	PJD-ACINLET GL-2100M (AC inlet)			
12	PH31141	POW BUTTON PANEL PT2			
13	PC05361	POWER BUTTON PT2			

Quick Reference Replacement Parts List

No.	Cir. No.	P#	Description	Function	PWB ASSY	REMARKS
1	I901	CZ00863	STR-F6676 (LF1351)	SWITCHING REGULATOR	Power	
2	I902	CP07851	TLP421	OPT. ISOLATOR	Power	
3	I903	CP07851	TLP421	OPT. ISOLATOR	Power	
4	I904	CP07851	TLP421	OPT. ISOLATOR	Power	
5	I905	CP07851	TLP421	OPT. ISOLATOR	Power	
6	I931	CP05941F	SI-8050E	SWITCHING REGULATOR	Power	
7	I001	CK37371U	M306V3MG	TV U-COM	AV	
8	I002	CK37051R	BD4729G-TR	RESET IC	AV	
9	I003	CK35894R	CAT24WC32J1	EEPROM	AV	
10	I201	CK31992R	BU4053BCF-E2	MAIN/SUB SELECTOR	AV	
11	I202	CK37411R	S3C80F9XHF-QZR7	IR-BLASTER	AV	
12	I203	CK32271R	MC74VHCT244ADTR2	OCTAL BUS BUFFER	AV	
13	I204	CK31992R	BU4053BCF-E2	MAIN/SUB SELECTOR	AV	
14	I206	CK32271R	MC74VHCT244ADTR2	OCTAL BUS BUFFER	AV	
15	I207	CK01172R	HD7414CP221FP	DUAL MONOSTABLE MULTI-VIBRATOR	AV	
16	I401	CK31991R	BU4052BCF-E2	MAIN/SUB SELECTOR	AV	
17	I402	CP02601	AN5285K	PERFECT VOL.	AV	
18	I403	CK31031R	BA3530FS-E2	HEAD PHONE AMP.	AV	
19	I901	CZ00512U	PQ1CF2	CHOPPER REGULATOR	AV	
20	I902	CP03921F	ICM SI-8033S	SWITCHING REGULATOR	AV	
21	I906	CK37192R	SI-3025LSA	+2.5V REGULATOR	AV	
22	I907	CK37194R	SI-3050LSA	+5.0V REGULATOR	AV	
23	I909	CK37194R	SI-3050LSA	+5.0V REGULATOR	AV	
24	I911	CK37193R	SI-3033LSA	+3.3V REGULATOR	AV	
25	I912	CZ00705R	BA09SFP-E2	+9V REGULATOR	AV	
26	I913	CZ00705R	BA09SFP-E2	+9V REGULATOR	AV	
27	I914	CZ00705R	BA09SFP-E2	+9V REGULATOR	AV	
28	I915	CZ00705R	BA09SFP-E2	+9V REGULATOR	AV	
29	I916	CZ00705R	BA09SFP-E2	+9V REGULATOR	AV	
30	I917	CZ00705R	BA09SFP-E2	+9V REGULATOR	AV	
31	IV01	CK07631R	TC90A45F	2L COMB. FOR SUB	AV	
32	IW01	CK36951U	UPD64083GF-3BA	3D Y/C SEP.	AV	
33	IW02	CK06097R	PST9127NR	RESET IC FOR IW01	AV	
34	IX01	CK30941U	CXA2069Q	A/V SELECTOR	AV	
35	IX02	CK34811U	MM1519XQ	YPbPr SELECTOR	AV	
36	IZ01	CK36961R	TA1340F	MAIN VIDEO/CHROMA	AV	
37	IZ02	CK36961R	TA1340F	SUB VIDEO/CHROMA	AV	
38	U101	HC00511	F-E-ENGE 6106D	1ST TUNER	AV	
39	U102	HC00462	F-E-ENG36614G	2ND TUNER	AV	
40	EANT	HP00771	UNX ANT SW	ANT SW BOX	AVC Chassis	
41	A41	CS00611	FC/MSC	FLEXCONTROLLER	AVC Chassis	
42	HM01	CZ00833	GP1U281R	I/R RECEIVER	Control	

32HDT20	**32" PLASMA TV**
PART NUMBER	**PART DESCRIPTION**
FPF17R-ABL5004	ADDRESS BUS BOARD (LEFT)
FPF17R-ABR5005	ADDRESS BUS BOARD (RIGHT)
FPF17R-LGC5009	LOGIC BOARD
FPF17R-XSS5010	X-SUS BOARD
FPF17R-YSS5011	Y-SUS BOARD
HA01023	DC-DC PWB UNIT
JP04843	VIDEO PWB ASSEBLY(SVC)
JT22733	AC-DC PWB ASSEMBLY
JT23201	POW/FIL ASSY 32HDT20

42HDT20	**42" PLASMA TV**
PART NUMBER	**PART DESCRIPTION**
FPF16R-ABL5004	ADDRESS BUS BOARD (LEFT)
FPF16R-ABR5005	ADDRESS BUS BOARD (RIGHT)
FPF16R-LGC5006	LOGIC BOARD
FPF16R-XSS5002	X-SUS BOARD
FPF16R-YSS5003	Y-SUS BOARD
HA00994	POWER PWB UNIT
JP05406	VIDEO PWB ASSEMBLY
JT23006	AC FILTER PWB ASSEMBLY

42HDT20A	**42" PLASMA TV**
PART NUMBER	**PART DESCRIPTION**
FPF16R-ABL5010	ADDRESS BUS BOARD (LEFT)
FPF16R-ABR5011	ADDRESS BUS BOARD (RIGHT)
FPF16R-LGC5007	LOGIC BOARD
FPF16R-XSS5008	X-SUS BOARD
FPF16R-YSS5009	Y-SUS BOARD
HA00994	POWER PWB UNIT
JP05406	VIDEO PWB ASSEMBLY
JT23006	AC FILTER PWB ASSEMBLY

Plasma Display Panel Connector Pin-outs

All voltages for connectors on each PWB

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(single left-click on blue text to jump to that section or page)

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Page 05..........Video PWB
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Page 05..........A-BUS-L PWB
Page 05..........A-BUS-R PWB
Page 06..........X-SUS PWB
Page 06..........Y-SUS PWB

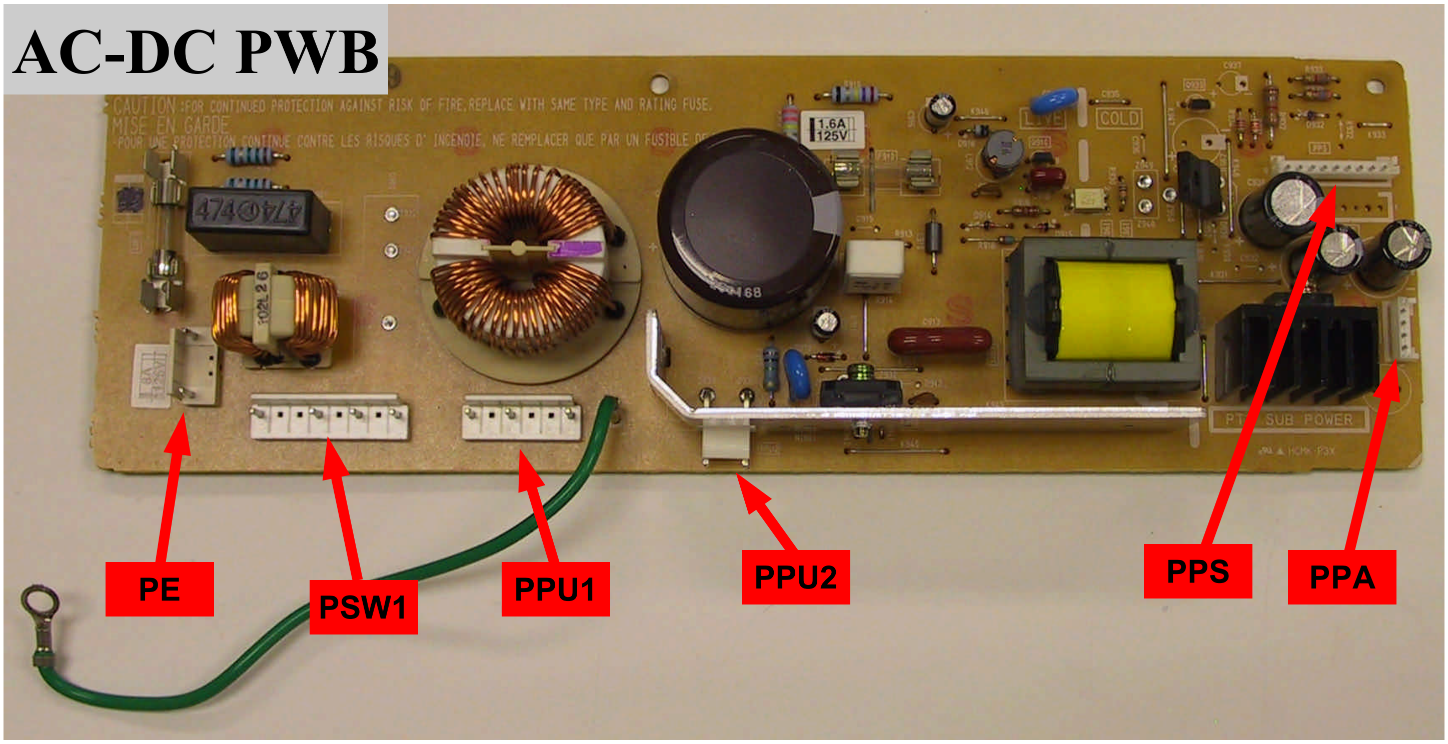
Plasma Display Panel
Connector Pin-outs

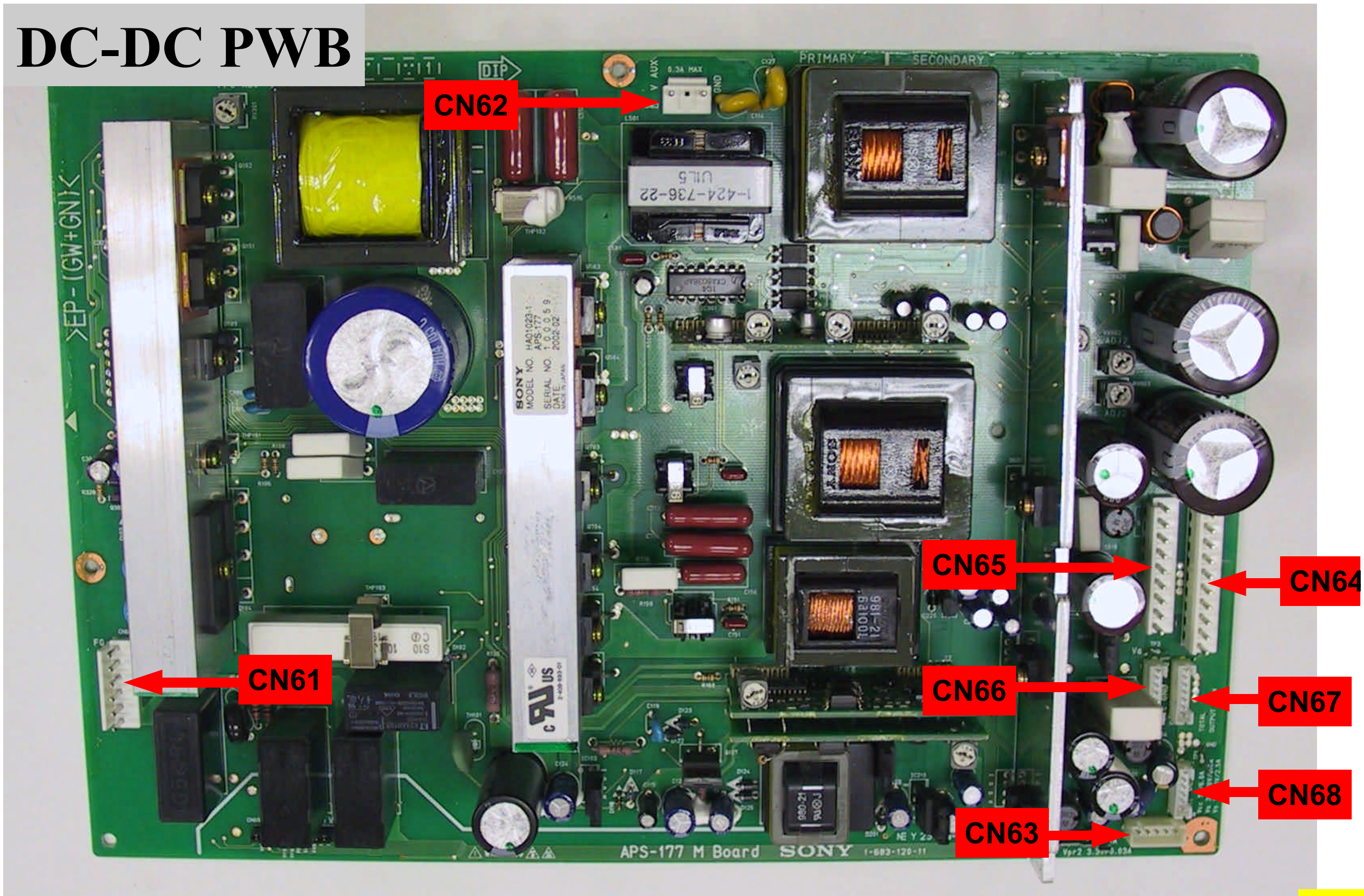
32HDT20

BOARD	CONN	PIN	Voltage	COMMENTS	To/From
A-BUS-L PWB	CN42	01	55.1 v	Yellow wire, Va supply	Voltage-Voltage PWB, CN66
		02		NC	
		03		NC	
		04	0.0 v	Black wire, ground	
		05	0.0 v	Black wire, ground	
		06		NC	
		07	5.0 v	Gray wire	
A-BUS-R PWB	CN52	01	55.1 v	Red wire, Va supply	Voltage-Voltage PWB, CN67
		02		NC	
		03		NC	
		04	0.0 v	Black wire, ground	
		05	0.0 v	Black wire, ground	
		06		NC	
		07	5.0 v	Gray wire	
AC-DC PWB	PE	01		AC, Always on	AC choke
		02		AC, Always on	
	PPA	01	12.0 v	Yellow wire	Video PWB, PPA
		02	12.0 v	Brown wire	
		03	0.0 v	Brown wire	
		04	0.0 v	Brown wire	
	PPS	01	0.0	Black wire	Video PWB, PPS
		02	0.0	Brown wire	
		03	0.0	Brown wire	
		04	0.0	Brown wire	
		05	5.15 v	Brown wire	
		06	0.0	Brown wire	
		07	0.0	Brown wire	
		08	13.9 v	Brown wire	
		09	13.9 v	Brown wire	
	PPU1	01		Switched AC	Voltage-Voltage PWB, CN61
		02		NC	
		03		Switched AC	
		04		NC	
		05		NC	
		06	0.0 v	Green wire, ground	
	PPU2	01		Fullwave rectified AC	Voltage-Voltage PWB, CN62
		02		NC	
		03		Fullwave rectfied AC	
	PSW1	01		AC, Always on	AC Switch
		02		NC	
		03		NC	
		04		AC, Always on	
		05		NC	
		06		Switched AC	
		07		NC	
		08		Switched AC	
Logic PWB	CN6	01	3.3 v	Blue wire	Voltage-Voltage PWB, CN68
		02		NC	
		03	0.0 v	Black wire, ground	
		04	0.0 v	Black wire, ground	
		05		NC	
		06	5.0 v	Gray wire	
Video PWB	PAS1	01		Black wire	Left Speaker
		02		White wire	
	PAS2	01		NC	Right Speaker
		02		Black wire	
		03		Red wire	
	PPA	01	12.0 v	Yellow wire	AC-Voltage PWB, PPA
		02	12.0 v	Brown wire	
		03	0.0 v	Brown wire	
		04	0.0 v	Brown wire	
	PPS	01	0.0 v	Black wire	AC-Voltage PWB, PPS
		02	0.0 v	Brown wire	
		03	0.0 v	Brown wire	
		04	0.0 v	Brown wire	
		05	5.15 v	Brown wire	
		06	0.0 v	Brown wire	
		07	0.0 v	Brown wire	
		08	13.9 v	Brown wire	
		09	13.9 v	Brown wire	
	PSC2	01	5.0 v	Blue wire	Front panel
		02		Brown wire	
		03	0.0 v	Brown wire	
		04		Brown wire	
		05	3.5 v	Brown wire	
		06	0.0 v	Brown wire	
	PSU	01	5.15 v	Pink wire	Voltage-Voltage PWB, CN63
		02	0.0 v	Brown wire	
		03	3.3 v	Brown wire	
		04	0.0 v	Brown wire	
		05	0.0 v	Brown wire	

BOARD	CONN	PIN	Voltage	COMMENTS	To/From
DC-DC PWB	CN61	01		Switched AC	AC-Voltage PWB, PPU1
		02		NC	
		03		Switched AC	
		04		NC	
		05		NC	
		06	Ground	Green wire	
	CN62	01		Fullwave rectified AC	AC-Voltage PWB. PPU2
		02		NC	
		03		Fullwave rectfied AC	
	CN63	01	5.15 v	Pink wire	Video PWB, PSU
		02	0.0 v	Brown wire	
		03	3.3 v	Brown wire	
		04	0.0 v	Brown wire	
		05	0.0 v	Brown wire	
	CN64	01	55.1 v	Yellow wire, Va supply	X-SUS PWB, CN23
		02		NC	
		03	5.0 v	Gray wire	
		04	0.0 v	Black wire, ground	
		05	0.0 v	Black wire, ground	
		06	0.0 v	Black wire, ground	
		07		NC	
		08	78.6 v	Yellow wire, Vs supply	
		09	78.6 v	Yellow wire, Vs supply	
		10	78.6 v	Yellow wire, Vs supply	
	CN65	01	5.0 v	Gray wire	Y-SUS PWB, CN33
		02	0.0 v	Black wire, ground	
		03	0.0 v	Black wire, ground	
		04	0.0 v	Black wire, ground	
		05	0.0 v	Black wire, ground	
		06		NC	
		07	78.6 v	Red wire, Vs supply	
		08	78.6 v	Red wire, Vs supply	
		09	78.6 v	Red wire, Vs supply	
	CN66	01	55.1 v	Yellow wire, Va supply	A-BUS-L PWB, CN42
		02		NC	
		03		NC	
		04	0.0 v	Black wire, ground	
		05	0.0 v	Black wire, ground	
		06		NC	
		07	5.0 v	Gray wire	
	CN67	01	55.1 v	Red wire, Va supply	A-BUS-R PWB, CN52
		02		NC	
		03		NC	
		04	0.0 v	Black wire, ground	
		05	0.0 v	Black wire, ground	
		06		NC	
		07	5.0 v	Gray wire	
	CN68	01	3.3 v	Blue wire	Logic PWB, CN6
		02		NC	
		03	0.0 v	Black wire, ground	
		04	0.0 v	Black wire, ground	
		05		NC	
		06	5.0 v	Gray wire	
X-SUS PWB	CN22	01	0.0 v	Blue wire	Y-SUS PWB, CN32
		02	5.0 v	Blue wire	
		03	0.0 v	Blue wire	
		04	0.0 v	Blue wire	
		05	162.0 v	Blue wire, Vw supply	
	CN23	01	55.1 v	Yellow wire, Va supply	Voltage-Voltage PWB, CN64
		02		NC	
		03	5.0 v	Gray wire	
		04	0.0 v	Black wire, ground	
		05	0.0 v	Black wire, ground	
		06	0.0 v	Black wire, ground	
		07		NC	
		08	78.6 v	Yellow wire, Vs supply	
		09	78.6 v	Yellow wire, Vs supply	
		10	78.6 v	Yellow wire, Vs supply	
Y-SUS PWB	CN32	01	0.0 v	Blue wire	X-SUS PWB, CN22
		02	5.0 v	Blue wire	
		03	0.0 v	Blue wire	
		04	0.0 v	Blue wire	
		05	162.0 v	Blue wire, Vw supply	
	CN33	01	5.0 v	Gray wire	Voltage-Voltage PWB, CN65
		02	0.0 v	Black wire, ground	
		03	0.0 v	Black wire, ground	
		04	0.0 v	Black wire, ground	
		05	0.0 v	Black wire, ground	
		06		NC	
		07	78.6 v	Red wire, Vs supply	
		08	78.6 v	Red wire, Vs supply	
		09	78.6 v	Red wire, Vs supply	

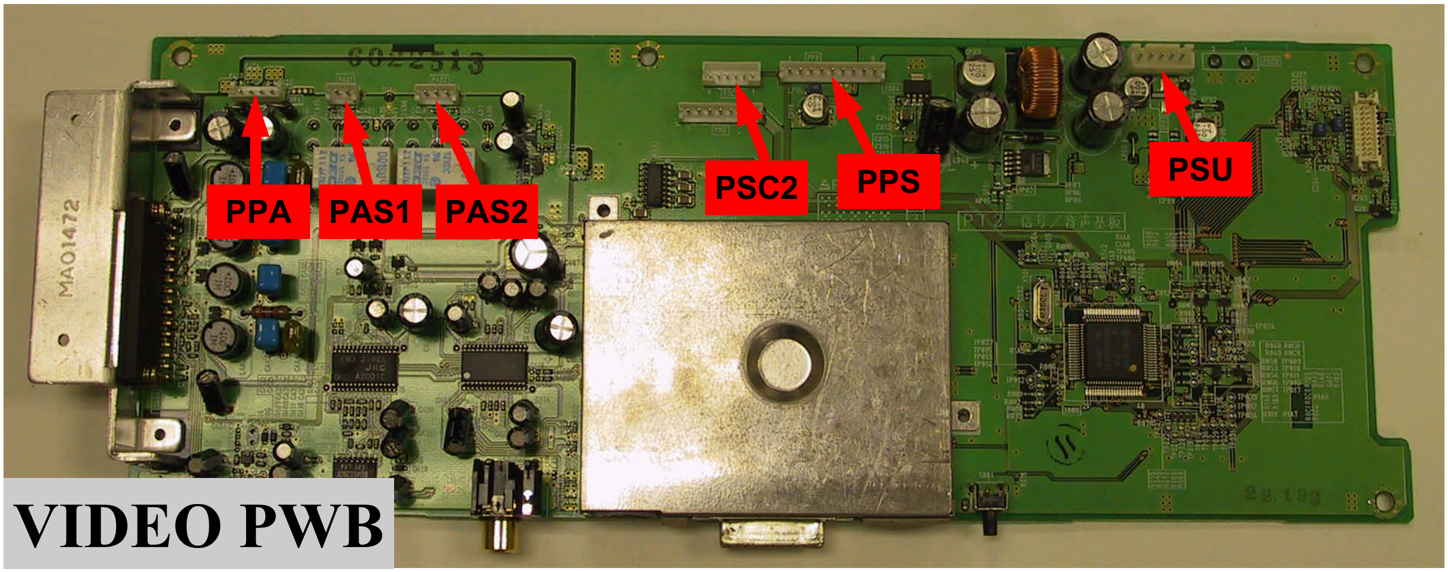
32HDT20 - PWB Layout

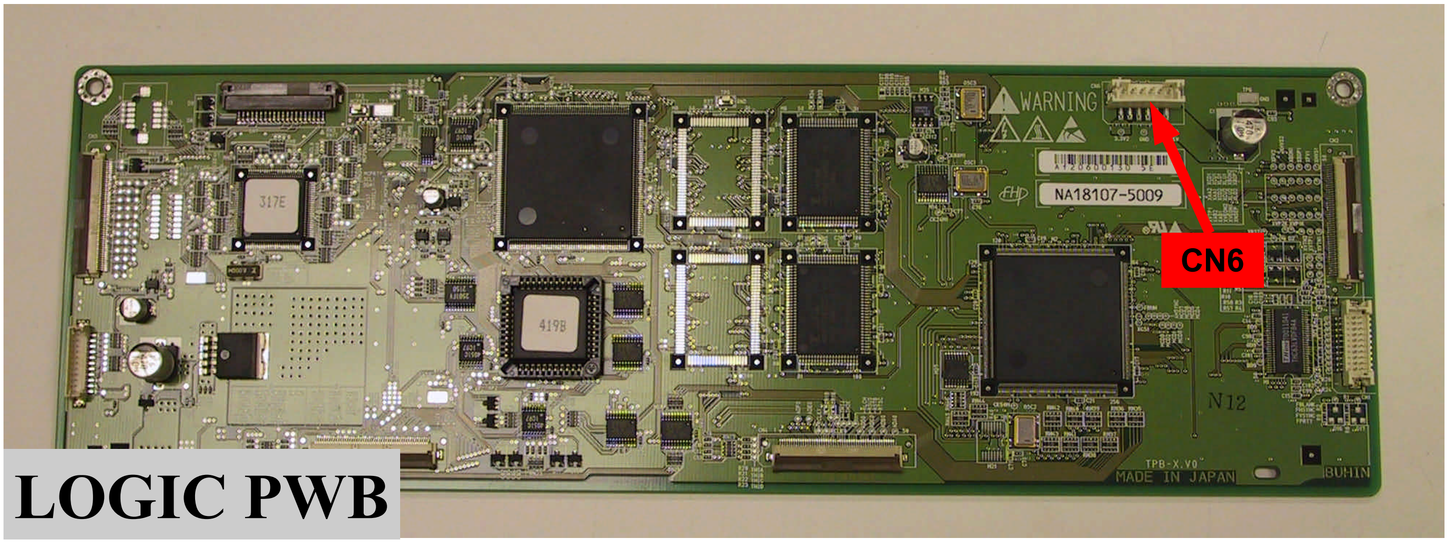

AC-DC PWB
PE
PSW1
PPU1
PPU2
PPS
PPA

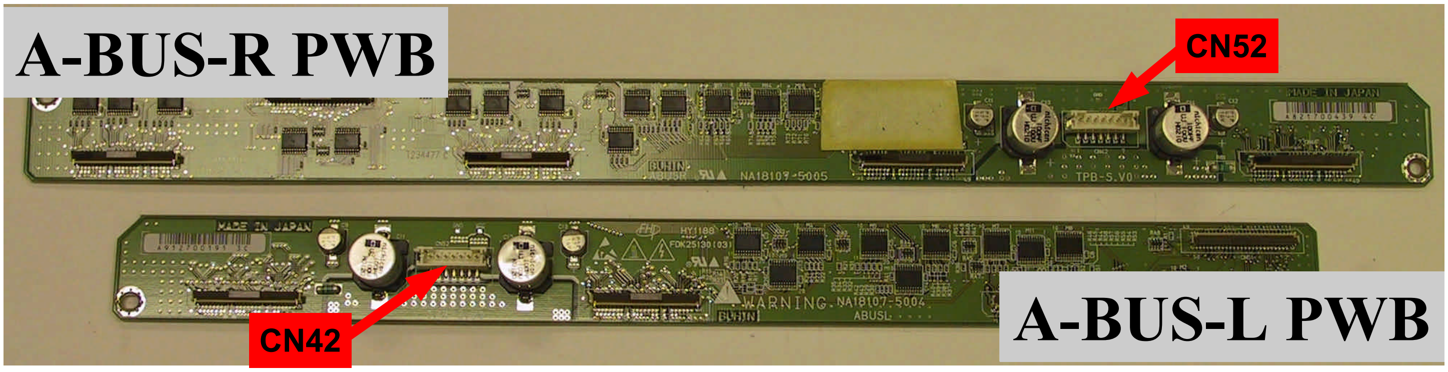

DC-DC PWB
CN62
CN65
CN64
CN61
CN66
CN67
CN68
CN63

CH 2

32HDT20 - PWB Layout


PPA
PAS1
PAS2
PSC2
PPS
PSU
VIDEO PWB


CN6
LOGIC PWB


A-BUS-R PWB
CN52
CN42
A-BUS-L PWB

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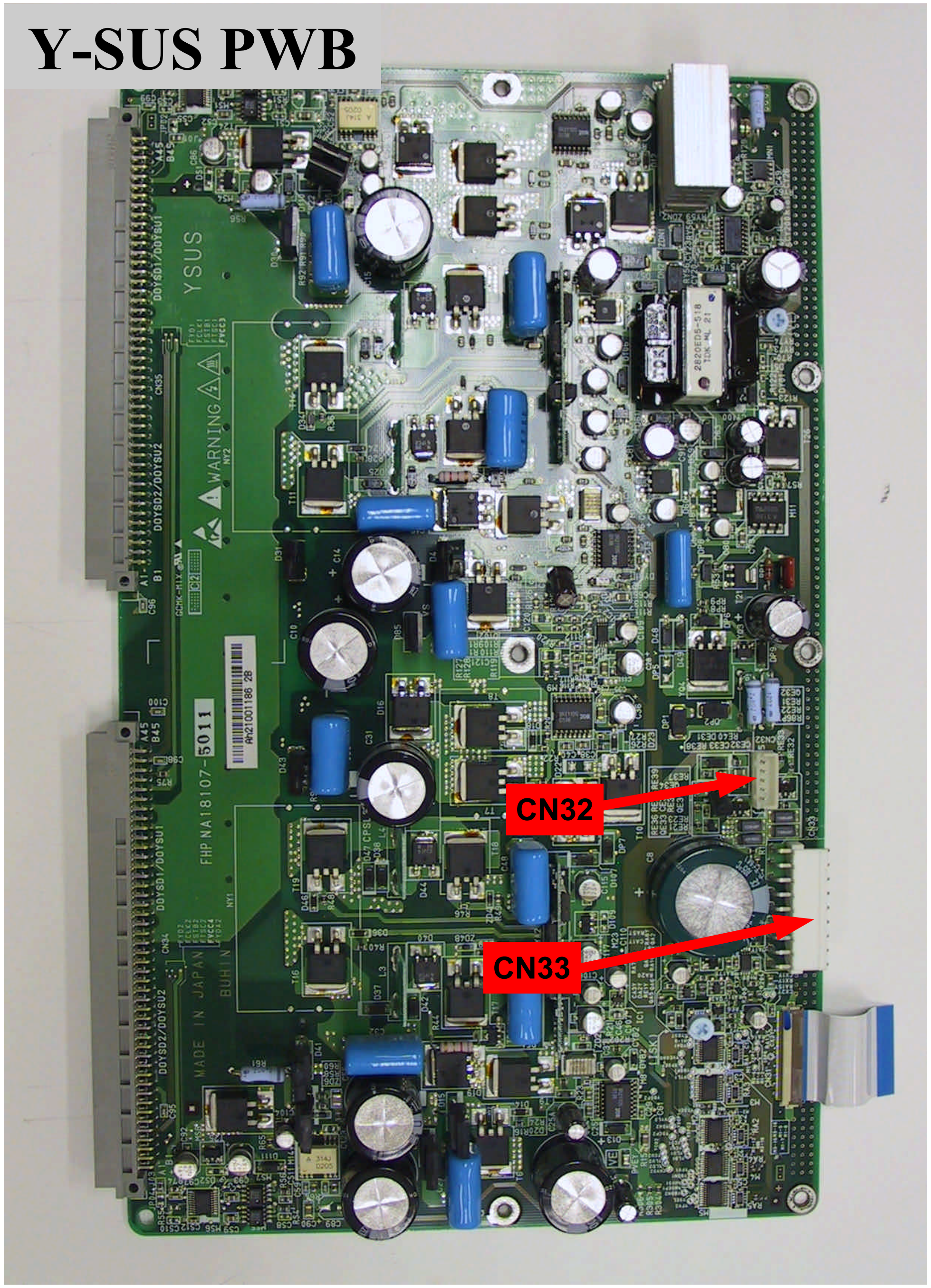
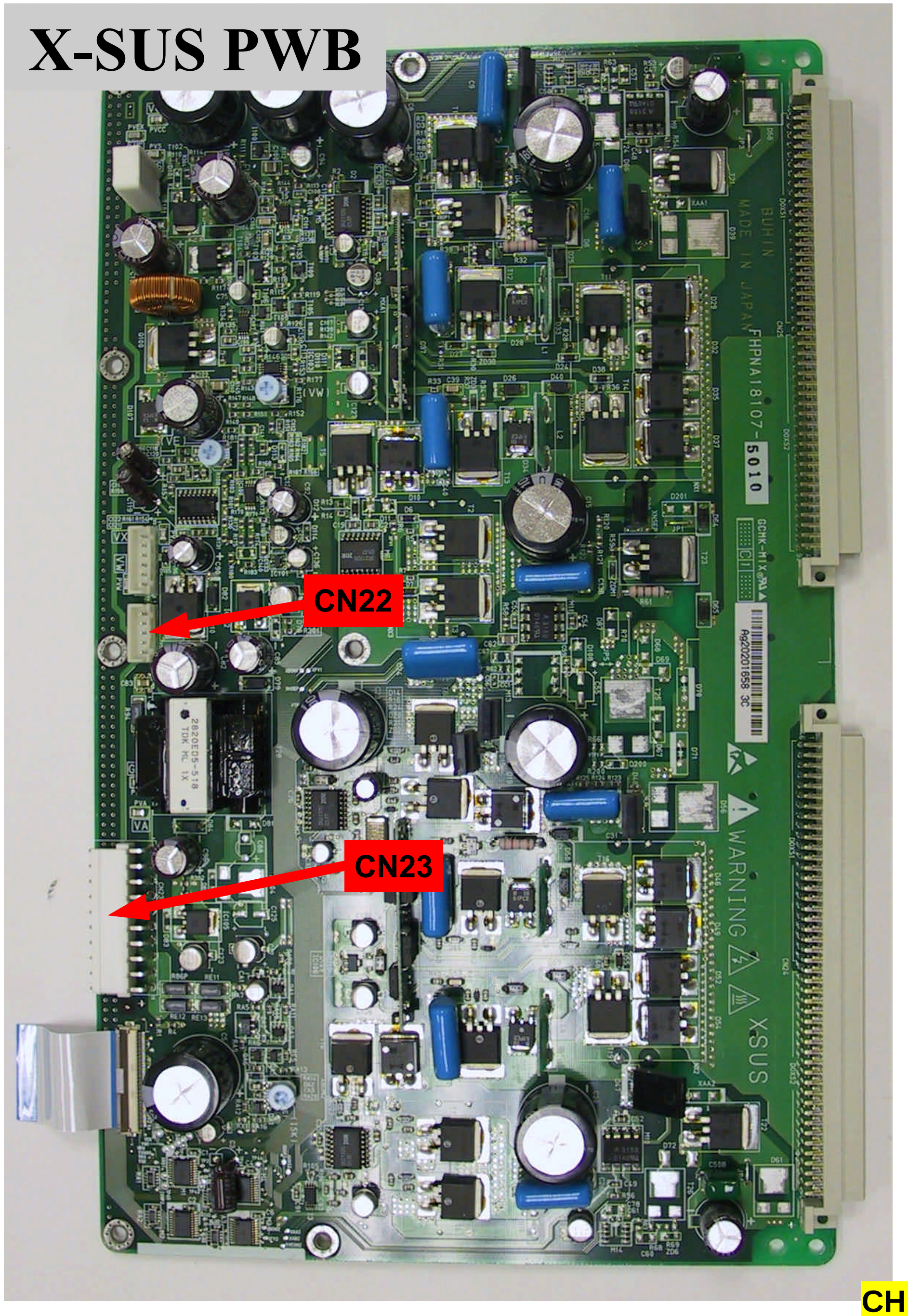


Y-SUS PWB



X-SUS PWB

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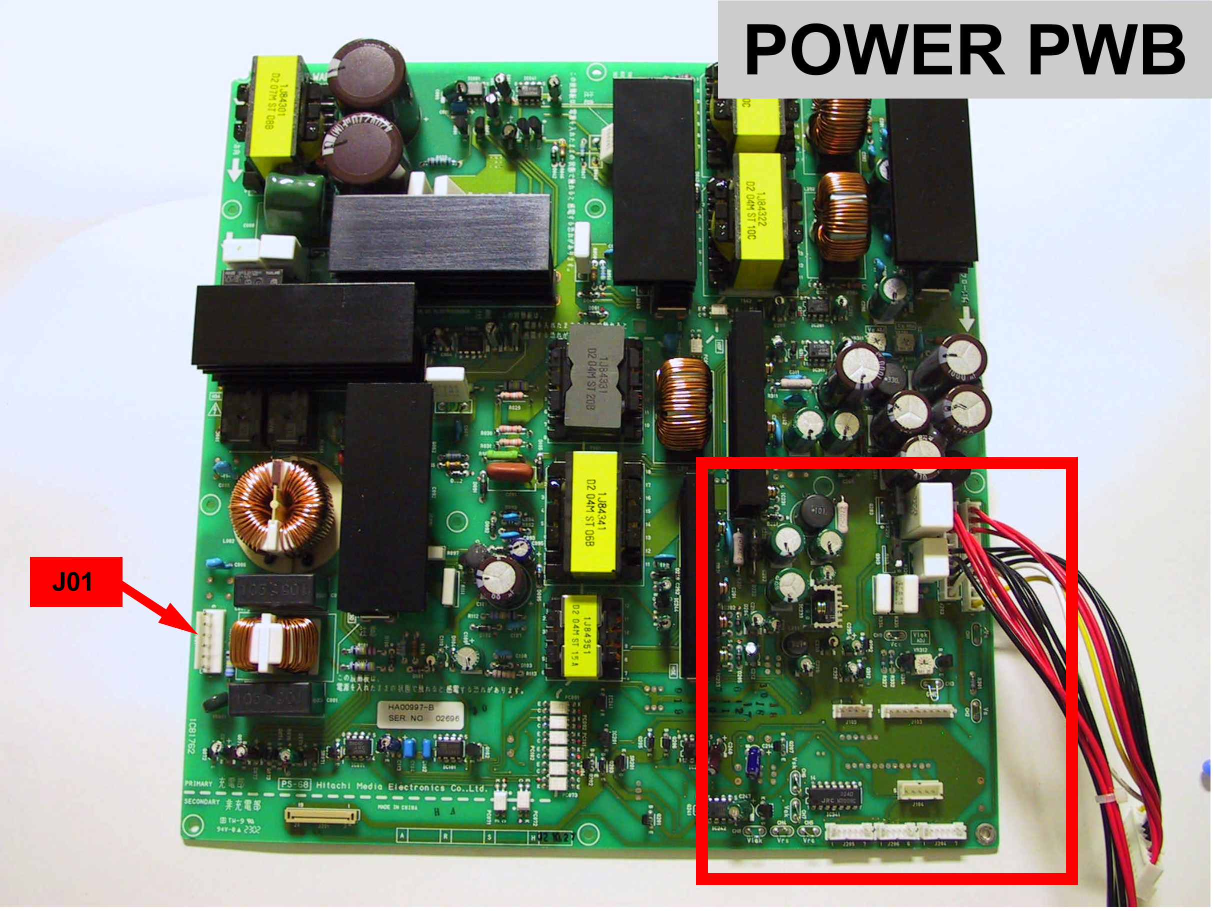
Page 10..........A-BUS-L PWB
Page 10..........A-BUS-R PWB
Page 11..........X-SUS PWB
Page 11..........Y-SUS PWB

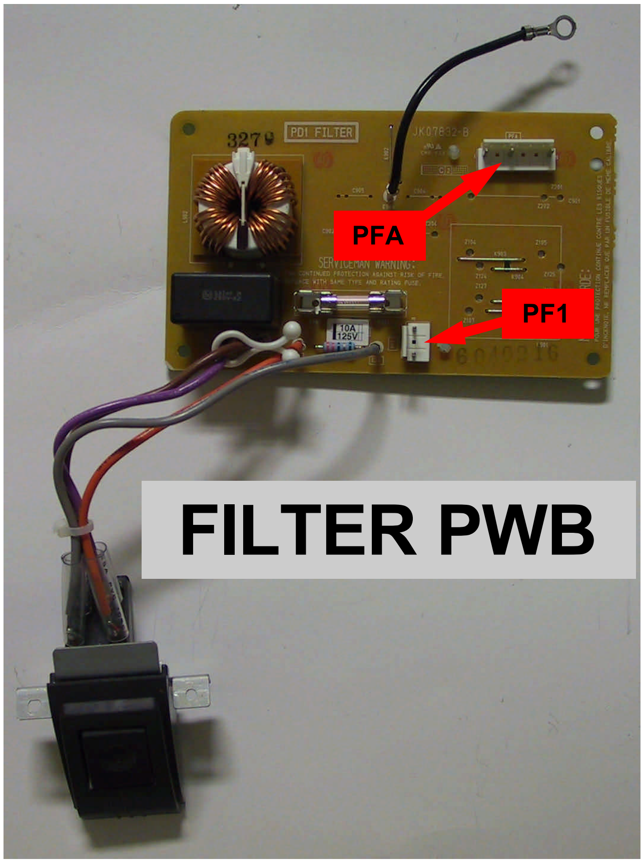
Plasma Display Panel
Connector Pin-outs

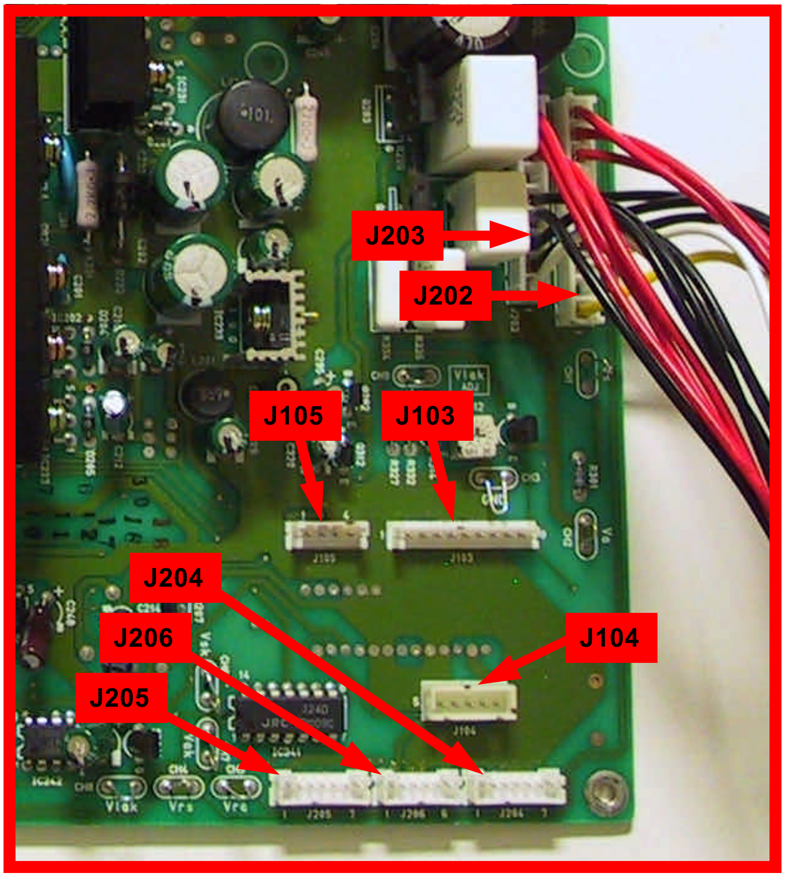
42HDT20

BOARD	CONN	PIN	Voltage	COMMENTS	To/From
AC FILTER PWB	PF1	01		AC, always on	AC CHOKE
		02		NC	
		03		AC, always on	
	PFA	01		Brown wire, Switched AC	POWER PWB, J01
		02		NC	
		03		Orange wire, Switched AC	
		04		NC	
		05		NC	
		06		Blue wire, ground	
POWER PWB	J01	01		Brown wire, Switched AC	AC FILTER PWB
		02		NC	
		03		Orange wire, Switched AC	
		04		NC	
		05		NC	
		06		Blue wire, ground	
	J103	01	0.0 v	Black wire	VIDEO PWB, PPS
		02	0.0 v	Brown wire	
		03	0.0 v	Brown wire	
		04	0.0 v	Brown wire, ground	
		05	4.97 v	Brown wire	
		06	0.0 v	Brown wire, ground	
		07	0.0 v	Brown wire, ground	
		08	14.98 v	Brown wire	
		09	14.98 v	Brown wire	
	J104	01	4.97 v	Pink wire	VIDEO PWB, PSU
		02	0.0 v	Brown wire	
		03	3.3 v	Brown wire	
		04	0.0 v	Brown wire	
		05	0.0 v	Brown wire, ground	
	J105	01	12.22 v	Yellow wire	VIDEO PWB, PPA
		02	12.22 v	Brown wire	
		03	0.0 v	Brown wire, ground	
		04	0.0 v	Brown wire, ground	
	J202	01	60.5	Yellow wire, Va supply	X-SUS PWB, CN23
		02		NC	
		03	5.22 v	White wire	
		04	0.0 v	Black wire, ground	
		05	0.0 v	Black wire, ground	
		06	0.0 v	Black wire, ground	
		07		NC	
		08	82.0 v	Red wire, Vs supply	
		09	82.0 v	Red wire, Vs supply	
		10	82.0 v	Red wire, Vs supply	
	J203	01	5.22 v	White wire	Y-SUS PWB, CN33
		02	0.0 v	Black wire, ground	
		03	0.0 v	Black wire, ground	
		04	0.0 v	Black wire, ground	
		05	0.0 v	Black wire, ground	
		06		NC	
		07	82.0 v	Red wire, Vs supply	
		08	82.0 v	Red wire, Vs supply	
		09	82.0 v	Red wire, Vs supply	
	J204	01	60.5 v	Red wire, Va supply	A-BUS-L PWB, CN52
		02		NC	
		03		NC	
		04	0.0 v	Black wire, ground	
		05	0.0 v	Black wire, ground	
		06		NC	
		07	5.22 v	Gray wire	
	J205	01	60.5 v	Yellow wire, Va supply	A-BUS-R PWB, CN42
		02		NC	
		03		NC	
		04	0.0 v	Black wire, ground	
		05	0.0 v	Black wire, ground	
		06		NC	
		07	5.22 v	Gray wire	
	J206	01	3.3 v	Blue wire	LOGIC PWB, CN6
		02		NC	
		03	0.0 v	Black wire, ground	
		04	0.0 v	Black wire, ground	
		05		NC	
		06	5.22 v	Gray wire	
LOGIC PWB	CN6	01	3.3 v	Blue wire	POWER PWB, J206
		02		NC	
		03	0.0 v	Black wire, ground	
		04	0.0 v	Black wire, ground	
		05		NC	
		06	5.22 v	Gray wire	

BOARD	CONN	PIN	Voltage	COMMENTS	To/From
VIDEO PWB	PAS1	01	(audio)	Red wire	L SPEAKER
		02	(audio)	Brown wire	
	PAS2	01	(audio)	Orange wire	R SPEAKER
		02	(audio)	Brown wire	
		03	(audio)	Brown wire	
	PPA	01	12.22 v	Yellow wire	POWER PWB, J105
		02	12.22 v	Brown wire	
		03	0.0 v	Brown wire, ground	
		04	0.0 v	Brown wire, ground	
	PPS	01	0.0 v	Black wire	POWER PWB, J103
		02	0.0 v	Brown wire	
		03	0.0 v	Brown wire	
		04	0.0 v	Brown wire, ground	
		05	4.97 v	Brown wire	
		06	0.0 v	Brown wire, ground	
		07	0.0 v	Brown wire, ground	
		08	14.98 v	Brown wire	
		09	14.98 v	Brown wire	
	PSC2	01	4.95 v	Blue wire	FRONT PANEL
		02	0.7 v	Brown wire	
		03	0.0 v	Brown wire	
		04	0.0 v	Brown wire	
		05	3.4 v	Brown wire	
		06	0.0 v	Brown wire	
	PSU	01	4.97 v	Pink wire	POWER PWB, J104
		02	0.0 v	Brown wire	
		03	3.3 v	Brown wire	
		04	0.0 v	Brown wire	
		05	0.0 v	Brown wire, ground	
A-BUS-L PWB	CN52	01	60.5 v	Red wire, Va supply	POWER PWB, J204
		02		NC	
		03		NC	
		04	0.0 v	Black wire, ground	
		05	0.0 v	Black wire, ground	
		06		NC	
		07	5.22 v	Gray wire	
A-BUS-R PWB	CN42	01	60.5 v	Yellow wire, Va supply	POWER PWB, J205
		02		NC	
		03		NC	
		04	0.0 v	Black wire, ground	
		05	0.0 v	Black wire, ground	
		06		NC	
		07	5.22 v	Gray wire	
X-SUS PWB	CN22	01	177.0 v	Blue wire, Vw supply	Y-SUS PWB, CN32
		02		NC	
		03	0.0 v	Blue wire	
		04		NC	
		05	-5.15 v	Blue wire	
	CN23	01	60.5	Yellow wire, Va supply	POWER PWB, J202
		02		NC	
		03	5.22 v	White wire	
		04	0.0 v	Black wire, ground	
		05	0.0 v	Black wire, ground	
		06	0.0 v	Black wire, ground	
		07		NC	
		08	82.0 v	Red wire, Vs supply	
		09	82.0 v	Red wire, Vs supply	
		10	82.0 v	Red wire, Vs supply	
Y-SUS PWB	CN32	01	177.0 v	Blue wire, Vw supply	X-SUS PWB, CN22
		02		NC	
		03	0.0 v	Blue wire	
		04		NC	
		05	-5.15 v	Blue wire	
	CN33	01	5.22 v	White wire	POWER PWB, J203
		02	0.0 v	Black wire, ground	
		03	0.0 v	Black wire, ground	
		04	0.0 v	Black wire, ground	
		05	0.0 v	Black wire, ground	
		06		NC	
		07	82.0 v	Red wire, Vs supply	
		08	82.0 v	Red wire, Vs supply	
		09	82.0 v	Red wire, Vs supply	


POWER PWB
J01


PFA
PF1
FILTER PWB


J203
J202
J105
J103
J204
J206
J205
J104

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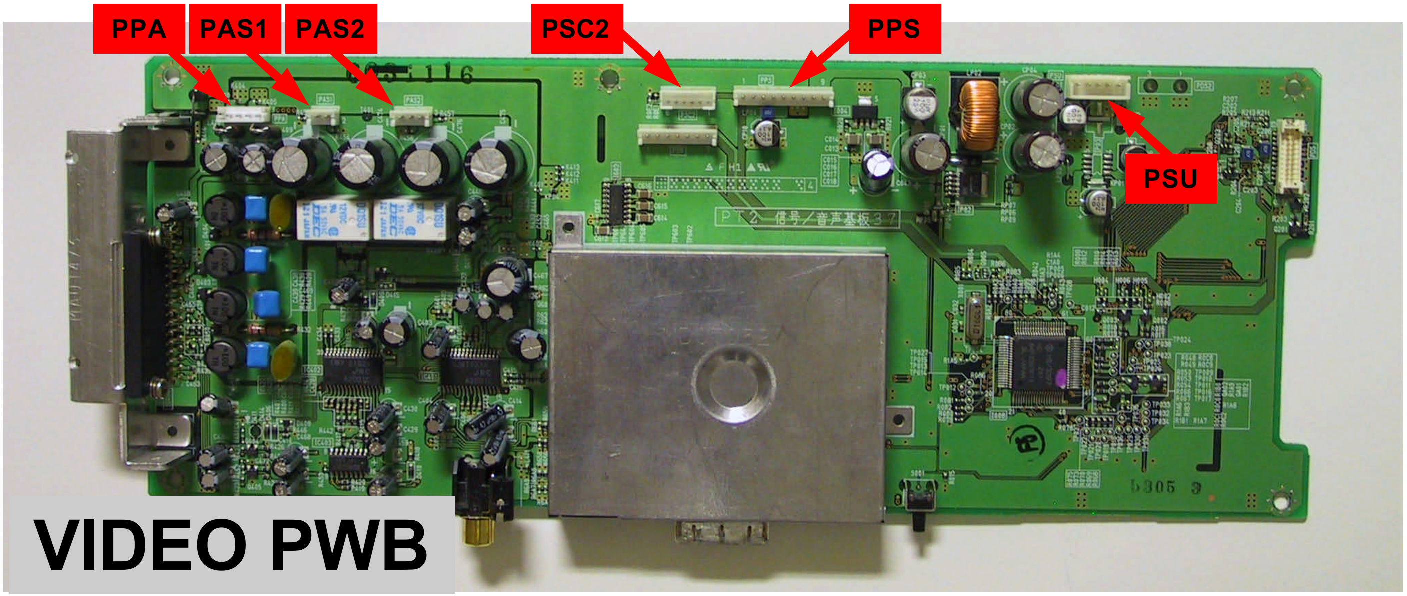
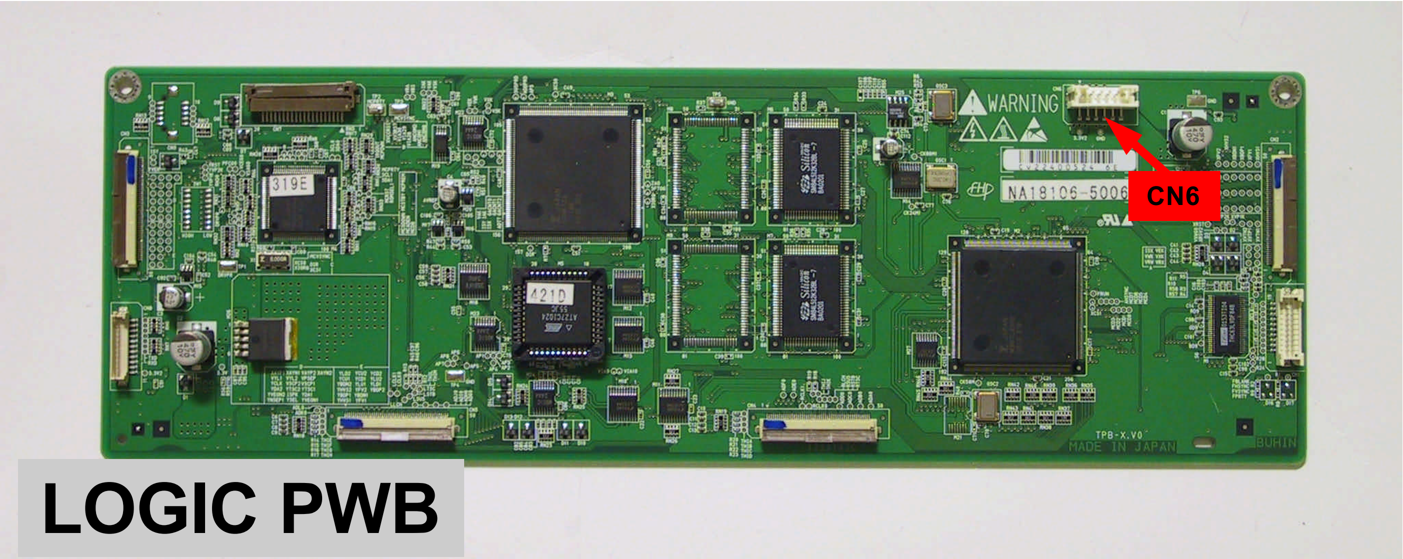
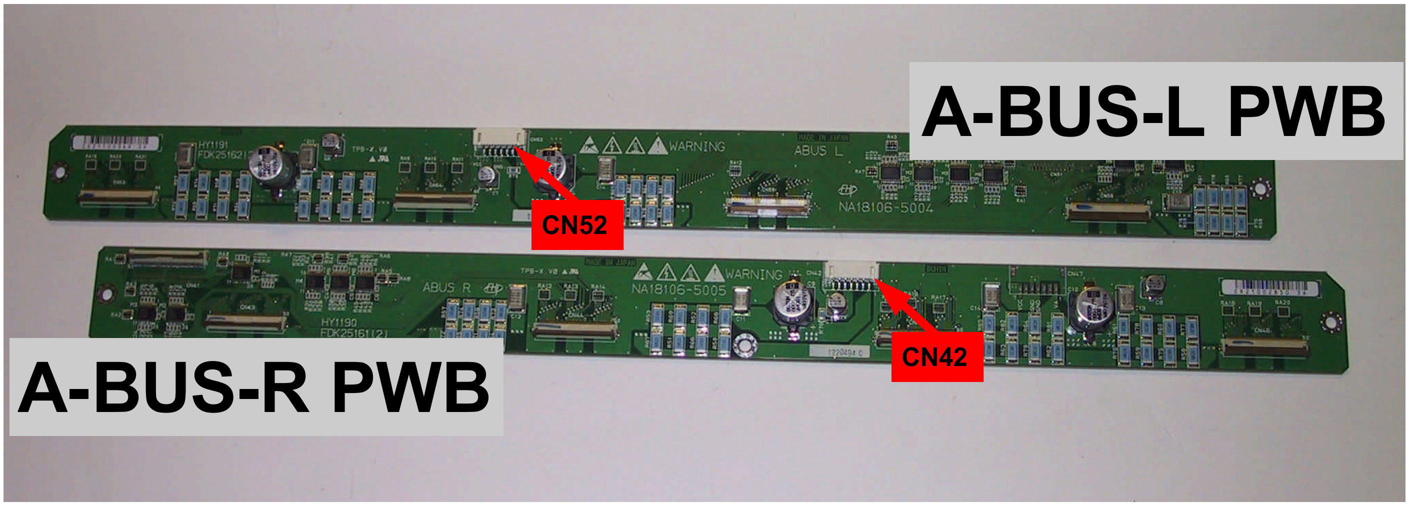

PPA
PAS1
PAS2
PSC2
PPS
PSU
VIDEO PWB


CN6
LOGIC PWB


A-BUS-L PWB
CN52
CN42
A-BUS-R PWB

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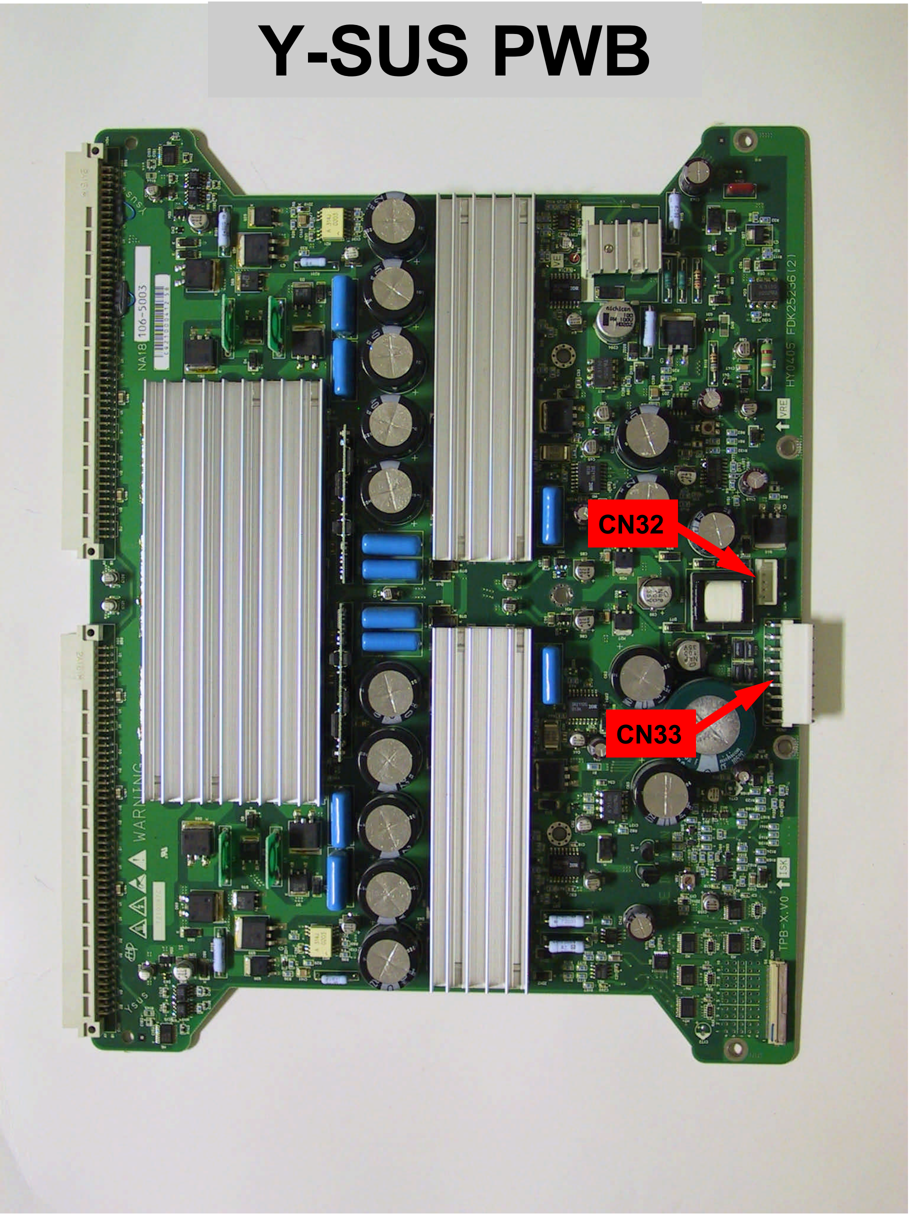
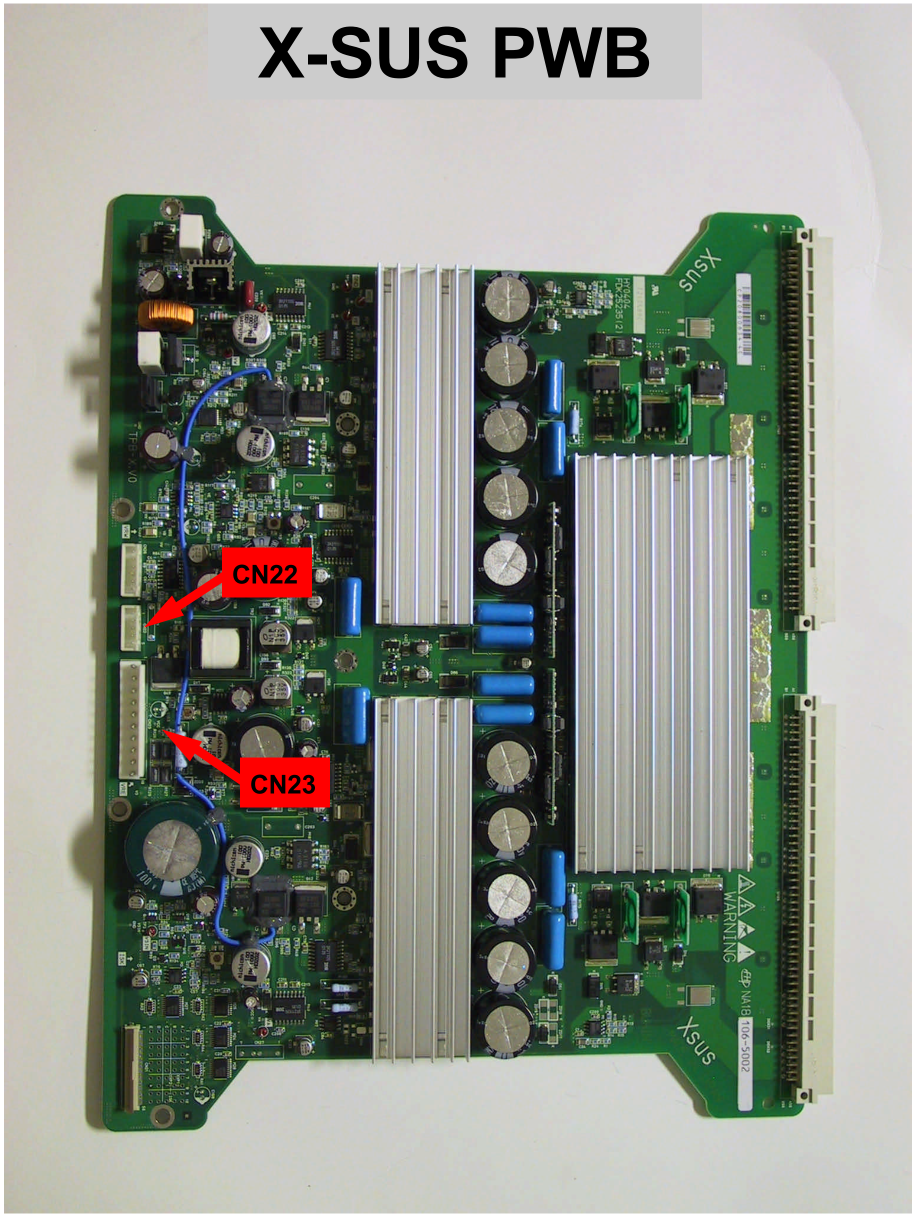
CH 2

Y-SUS PWB



X-SUS PWB



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HITACHI